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RALPH BROWN DRAUGHON
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The present forecasts will be updated in the World Agricultural Supply and Demand Estimates scheduled for release on February 13 and March 12, 1984.

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Summary

To bring U.S. milk production into better harmony with demand, new dairy legislation required the USDA on December 1, 1983, to lower the support price of milk to $12.60 per cwt. That will be the level of support until March 31, 1985. However, two more cuts of 50 cents per cwt could be made later in 1985, if annual net purchases are projected above specific levels.

The law, signed on November 29, 1983, supersedes all dairy provisions of the Omnibus Budget Reconciliation Act of 1982. It mandated a 50-cent-per-cwt deduction on all milk marketed that started December 1, 1983. The funds collected will be used to help fund a paid-diversion program, which began January 1, 1984. Another mandatory deduction of 15 cents per cwt will start when a program for dairy product promotion, research, and nutrition education becomes effective.

Under the paid-diversion program, participating producers will be paid $10 per cwt for marketings reduced below a certain base. This base is either an average of 1981 and 1982 marketings or 1982 marketings, whichever the producer selects. Contracts will be for reductions of 5 to 30 percent. Producers who elect to contract must sign up by January 31, 1984, for the 15-month program, which applies only to the 48 contiguous States and ends on March 31, 1985.

Record milk production and lower commercial disappearance during 1983 resulted in USDA making record net purchases. Under the new law, 1984 milk production is expected to be down substantially, and commercial disappearance will likely improve, resulting in smaller USDA net purchases. However, it may be several months before production and use regain a balance in the commericial dairy products market.

December marked the 56th consecutive month of year-to-year increases in milk production. Since mid-1979, these increases came from gains in cow numbers and in more milk per cow. In December, output per cow gained an estimated 1.2 percent over a year earlier; cow numbers were up an estimated 0.4 percent.

Although cow numbers showed month-to-month increases this summer and fall, they declined in December and should continue to decrease because of the new law. Cow numbers during 1983 averaged a slight gain from 1982, whereas under the new law, they should drop substantially in 1984. Likewise, average output per cow could also decline in 1984. This would be the first drop in output per cow since 1973, brought about as participating farmers adjust their feeding rates and management practices to meet some of their contracted reductions. Total milk production for 1983 was a record 138.9 billion pounds, up 2.3 percent from 1982, but in 1984, production should be down 2 to 10 percent.

For 1983, the all-milk price received by farmers averaged $13.56 per cwt, 3 cents lower than a year earlier. However, after adjusting for the 50-cent deductions, the effective return per cwt is down 51 cents (3.8 percent). The all-milk price is expected to be below year-earlier levels through midspring. Then a better balance between supply and demand could bring prices equal to or above those of a year earlier. The average price and the effective returns this year will likely change little from 1983.

Wholesale prices for butter, cheese, and nonfat dry milk were near those of a year earlier until December 2, when they fell sharply because of lower Commodity Credit Corporation (CCC) support purchase prices. Wholesale prices had been unchanged since October 1980 because supplies were more than ample, and because CCC support purchase prices had been unchanged. Continued large supplies and the lower purchase prices will likely hold wholesale prices below a year earlier until late spring. Prices could move above a year earlier in late 1984 if the expected adjustments of production and use occur.

First-half 1983 commercial disappearance of all milk and dairy products (on a milk-equivalent, fat-solids basis) was down 2 percent from a year earlier. Third-quarter disappearance was down about 1 percent. Strength in the economy may have buttressed sales to their year-earlier level during the fourth quarter, leaving yearly disappearance down about 1.2 percent from 1982. In 1984, commercial use may rise 2 to 3 percent, because of a relatively small increase in retail prices, which means real prices will actually fall, the strong recovery in the economy, which means disposable income will increase, and the new promotion program.

USDA net removals during calendar 1983 were 16.8 billion pounds (milk-equivalent, fat-solids basis), compared with 14.3 billion in 1982. Net purchases by the CCC during 1984 are expected to be much lower because of less production and higher commercial disappearance.

Table 1.—U.S. dairy situation at a glance

Item	Unit or base period	Quarterly data					
		3rd 1981	3rd 1982	4th 1982	1st 1983	2nd 1983	3rd 1983
Production and cow numbers:							
Total milk	Mil. lb	33,178	33,983	32,854	33,955	36,453	34,842
Milk per cow	Lb	3,036	3,082	2,972	3,070	3,294	3,141
Number of milk cows	Thou.	10,928	11,026	11,053	11,059	11,068	11,093
Prices received by farmers:							
All milk, sold to plants, 100 pounds	Dol	13.53	13.37	13.87	13.73	13.33	13.33
Percentage of parity[1]	Pct	68	65	63	62	63	61
Manufacturing grade milk, 100 pounds	Dol	12.47	12.40	12.97	12.80	12.53	12.33
Parity equivalent	Dol	17.95	18.98	18.86	19.78	20.02	20.11
Fat content	Pct	3.57	3.57	3.82	3.75	3.62	3.52
Minnesota-Wisconsin (3.5% fat), 100 pounds	Dol	12.49	12.44	12.58	12.58	12.51	12.49
Milk eligible for fluid market, 100 pounds	Dol	13.73	13.50	14.03	13.93	13.47	13.47
Price ratio and dairy ration value:							
Milk/16-percent feed price relationship	Lb.	1.44	1.51	1.61	1.56	1.45	1.41
Value of concentrate ration fed, milk cows	Dol	8.21	7.66	7.30	7.28	7.46	7.81
Farm cash receipts from dairy products	Mil. dol	4,343	4,515	4,538	4,632	4,828	4,621
Production of factory products:							
Butter	Mil. lb	250.2	256.4	300.0	380.7	357.1	262.9
American cheese, whole milk	Mil. lb	627.3	673.2	655.7	705.2	819.3	703.3
Cheese other than American	Mil. lb	400.7	448.1	485.8	439.1	454.1	453.2
Canned milk, unskimmed	Mil. lb	194.6	184.0	181.6	163.6	183.4	154.5
Dry whole milk	Mil. lb	23.3	22.4	24.3	26.6	26.9	26.0
Frozen products[2]	Mil. gal	347.7	345.8	247.5	263.2	348.4	369.6
Creamed cottage cheese	Mil. lb	197.8	191.2	172.1	184.9	192.7	196.6
Total (milk-equivalent, fat-solids basis)[3]	Mil. lb	18,575	19,470	18,445	20,569	22,753	20,296
Nonfat dry milk, human use	Mil. lb	325.6	339.0	296.9	368.4	451.8	377.8
Wholesale prices:							
Butter, Grade A, Chicago, pound	Ct	148.2	148.0	147.9	147.2	147.3	148.7
Cheese, American (40-pound blocks), f.o.b. Wisconsin assembling points, pound	Ct	139.2	137.8	140.4	138.6	137.5	137.7
Evaporated milk, case	Dol	21.70	22.02	22.02	22.16	22.23	22.23
Nonfat dry milk, pound, f.o.b. Central States, high heat	Ct	92.9	93.1	93.2	93.4	93.4	93.4
Dairy products (BLS)	1967=100	244.1	248.8	250.3	250.8	250.8	250.1
Retail prices (BLS):							
Consumer price index[4]	1967=100	276.7	292.8	293.4	293.2	296.9	300.5
All food[4]	1967=100	277.2	287.8	286.6	289.2	292.1	292.3
All dairy products[4]	1967=100	244.1	247.3	247.4	249.6	250.1	250.1
Fluid milk and cream	12/77=100	134.7	135.4	135.2	136.7	136.5	136.3
Whole milk	1967=100	220.3	221.2	221.2	223.5	223.2	222.9
Other	12/77=100	134.8	135.9	135.3	137.3	136.8	136.5
Manufactured dairy products	12/77=100	142.7	146.1	146.5	147.2	148.3	148.5
Butter	1967=100	246.4	251.8	252.4	253.5	253.7	253.8
Cheese	12/77=100	140.8	144.6	144.6	145.4	146.3	146.7
Frozen desserts	12/77=100	148.1	150.1	151.5	152.1	153.2	152.8
Other	12/77=100	136.5	141.0	141.2	142.4	144.1	145.5
Margarine	1967=100	256.9	258.5	257.5	257.0	258.7	258.7
Stocks, end of quarter:							
Creamery butter	Mil. lb	489.5	510.0	466.8	533.0	588.5	555.3
Cheese total[5]	Mil. lb	982.1	1,054.2	1,064.2	1,145.7	1,194.7	1,323.0
Canned milk, unskimmed	Mil. lb	102.1	104.3	52.9	49.1	76.7	94.9
Dry whole milk	Mil. lb	3.0	7.3	6.0	5.0	5.8	4.4
Total (milk-equivalent, fat-solids basis)[6]	Mil. lb	19,813	20,916	20,054	22,204	23,847	24,418
Nonfat dry milk	Mil. lb	809.0	1,240.1	1,282.0	1,305.7	1,400.9	1,419.1
Commercial disappearance:							
Creamery butter	Mil. lb	222.9	217.1	251.0	208.3	208.5	219.0
Cheese, American	Mil. lb	544.7	549.4	528.1	459.2	558.4	473.3
Cheese, other than American	Mil. lb	459.8	501.0	596.2	496.1	496.5	498.3
Canned milk, unskimmed	Mil. lb	167.1	164.7	230.0	163.3	153.0	131.9
Milk in all products	Mil. lb	31,721	31,794	31,042	27,943	30,527	31,431
Nonfat dry milk	Mil. lb	155.4	147.1	120.2	109.0	111.2	129.4
USDA net removals:							
Butter	Mil. lb	36.8	42.7	44.6	172.5	148.9	44.3
Cheddar cheese	Mil. lb	137.1	177.3	117.1	209.7	272.2	221.3
Nonfat dry milk	Mil. lb	199.7	229.9	173.9	271.6	331.4	270.3
Evaporated milk	Mil. lb	4.7	6.0	5.3	5.3	5.0	6.8
Total (milk-equivalent, fat-solids basis)	Mil. lb	2,123	2,646	2,089	5,645	5,776	3,117

[1]Seasonally adjusted prices as percentage of parity price. [2]Ice cream, ice milk, and sherbet. [3]Includes manufactured products for which current data are available. [4]For all urban consumers starting January 1978. [5]Natural plus processed American cheese held by CCC. [6]Excludes cream and bulk condensed milk.

PRICES AND INCOME

New Dairy Legislation Signed

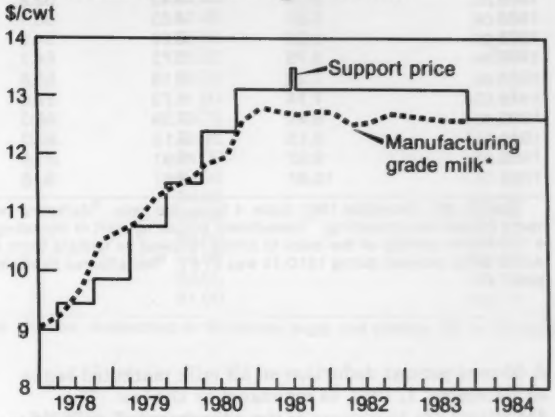
The dairy sector faced much uncertainty during 1983. Would new dairy legislation be passed? Would the support price be cut? Would the off- and on-again deductions be eliminated? Would there be a paid-diversion program and if so, what would be the payment rate and base? Would new legislation be signed into law?

Under such conditions, dairy producers tend to postpone major production decisions—delaying the exit of some producers and the herd reductions of others. Thus, the continued uncertainty over price-support policy likely prolonged the expansion in milk production, even though real returns per cwt were declining.

Following the late spring 1983 meetings between USDA officials and both majority and minority members of the agriculture committees of the Senate and House, a "compromise" on new dairy legislation was reached. The full Senate and House later amended and passed the bill and it was signed into law on November 29, 1983. Entitled the Dairy and Tobacco Adjustment Act of 1983, it supersedes all dairy provisions of the Omnibus Budget Reconciliation Act of 1982.

The new law mandated lowering the support price from $13.10 to $12.60 per cwt on December 1, which will be the level of support until March 31, 1985. However, if on April 1, 1985, the Secretary of Agriculture estimates that projected Commodity Credit Corporation (CCC) net purchases for the next 12 months will exceed 6 billion pounds, milk equivalent, the support price could be reduced by 50 cents per cwt. An additional 50-cent-per-cwt cut in the support level may be made on July 1, 1985, if CCC purchases from July 1, 1985, to June 30, 1986, are projected to exceed 5 billion pounds, milk equivalent. If CCC purchases for the next year on July 1, 1985, are projected to be less than 5 billion pounds, the support price may be increased, but not less than 50 cents per cwt.

Support and Manufacturing Milk Price



*Adjusted to a fat test of 3.67 percent

USDA Neg. ERS 413-84(1)

Table 2.—Manufacturing milk: Comparisons of announced support prices and U.S. average market prices paid to producers, marketing years, 1974-83[1]

Marketing year[2]	Support level			Average market level		
	Date effective	Percentage of parity equivalent[3]	Price per cwt	Price per cwt	As a percentage of parity equivalent	
					In month prior to marketing year	Average during marketing year
		Percent	*Dollars*		*Percent*	
1974	4/01/74	81	6.57			
	1/04/75	89	7.24	6.87	85	78
1975	4/01/75	79	7.24			
	0/02/75	84	7.71	8.12	89	84
1976	4/01/76	80	8.13			
	10/01/76	81	8.26	8.52	84	82
1977[4]	4/01/77	82	9.00	[5]8.77	80	80
1977	10/01/77	82	9.00			
	4/1/78	86	9.43	9.30	85	79
1978	10/01/78	80	9.87			
	4/01/79	87	10.76	10.86	88	80
1979	10/01/79	80	11.49			
	4/1/80	87	12.36	11.75	82	76
1980	10/01/80	80	13.10	12.71	78	73
1981	10/01/81	75	13.49			
	10/21/81	72.9	13.10	12.66	70	68
1982	10/01/82	69.1	13.10	12.66	67	64
1983	10/01/83	64.9	13.10			
	12/01/83	62.4	12.60			

[1]See DS-387, December 1981, table 2 for earlier data. [2]Start of marketing year was April 1 during 1974-77; was October 1 for 1977 to present. [3]Except as noted, this is the percentage published in month before the marketing year. In some cases, the announced percentages, based on forward estimates of parity, were slightly different. Parity equivalent is based on prices for all manufacturing grade milk. [4]April-September transition period. [5]Average for the transition period, adjusted to annual average fat test.

Table 3.—Computations of parity equivalents for U.S. manufacturing milk, per cwt, marketing years, 1974-83[1]

Marketing year[2]	Base period[3]			Adjusted base price[5]	Parity[4]		
	All milk wholesale	Manufacturing grade milk	Ratio		Index (1910-14=100)	Prices	
						All milk wholesale	Equivalent of manufacturing milk grade
	Dollars		*Percent*	*Dollars*		*Dollars*	
1974	5.39	4.43	82.2	1.80	549	9.88	8.12
1975	5.81	4.83	83.1	1.80	612	11.00	9.14
1976	6.26	5.26	84.0	1.82	664	12.10	10.16
1977[6]	6.75	5.72	84.7	1.88	685	12.90	10.93
1978	7.22	6.18	85.6	1.90	756	14.40	12.33
1979	7.74	6.73	87.0	1.91	862	16.50	14.36
1980	8.40	7.39	88.0	1.91	972	18.60	16.37
1981	9.13	8.13	89.0	1.94	1,042	20.20	17.98
1982	9.92	8.91	89.8	1.96	1,077	21.10	18.95
1983	10.67	9.67	90.6	2.01	1,108	22.30	20.20

[1]See DS-387, December 1981, table 4 for earlier data. [2]Marketing year began on April 1 until shifted to October 1 in 1977. [3]For the 10 calendar years immediately preceding. [4]Immediately preceding start of marketing year. [5]A 120-month average of farm prices for all wholesale milk divided by a 120-month average of the index of prices received by farmers (both adjusted for supplemental payments) ending with December of previous year. Actual price received during 1910-14 was $1.61. [6]Not affected by change in marketing year, as computations were identical on both April 1 and October 1.

A 50-cent-per-cwt deduction on all milk marketed began on December 1, 1983, as mandated by the law. The deductions are to encourage the adjustment of milk production to levels that are consistent with national demand. The funds collected will be used to help fund a paid-diversion program. The law also includes a mandatory deduction of 15 cents per cwt for dairy product promotion, research, and nutrition education, but allows up to 10-cents per cwt credit for qualifying State or regional promotion programs. An order implementing the promotion program will be issued in late March.

The paid-diversion program started January 1, 1984. The payment rate is $10 per cwt for reductions in marketings from a certain base. Under the program, a producer will specify in a contract a 5- to 30-percent reduction either below the average of calendar 1981 and 1982 marketings, or below calendar 1982 marketings, whichever the producer selects as the base. The Secretary of Agriculture has authority to adjust individual contracts downward if the sum of contract reductions exceed the total needed. In addition, the Secretary may adjust contracts, if needed, to minimize the impacts of cull dairy animals on the beef, pork, and poultry markets. Producers who elect to contract must have signed up by January 31, 1984, for the 15-month program. Both the paid-diversion and deduction authority apply only to the 48 contiguous States, and both will end on March 31, 1985.

Wholesale Prices Decline

Wholesale prices for butter, cheese, and nonfat dry milk had been nearly unchanged since October 1980, because supplies were more than ample and because CCC support purchase prices had been unchanged. However, on December 2, prices fell sharply because the CCC lowered the support purchase prices for quantities produced on or after December 1, 1983. During times of significant price support purchases, the CCC purchase prices for butter, cheddar cheese, and nonfat dry milk tend to become the floor for the wholesale market prices.

With no change in the manufacturing allowances used to calculate the new purchase prices, the full 50-cent reduction in the support level was reflected in the purchase prices of butter, cheese, and nonfat dry milk. The butter price at Chicago (Grade A or higher) was reduced 5.75 cents to 143.25 cents per pound, while the nonfat dry milk (Extra Grade) price dropped 3 cents, to 91 cents per pound. Cheddar cheese purchase prices were reduced 4.75 cents, to 134.75 cents per pound in 40- or 60-pound blocks, and 131.75 cents in 500-pound barrels.

Reflecting the lower wholesale spot prices, the Bureau of Labor Statistics (BLS) December wholesale price index for all dairy products equaled 249.2 (1967=100), down nearly 1 percent from November and below a year earlier. This is the first time since December 1976 that the index has fallen below year-earlier levels.

With continued large supplies and the lower level of support purchase prices, wholesale dairy product prices are expected to be lower than a year earlier until at least late spring. Wholesale prices could move higher during second-half 1984. In fact, if the expected adjustments of production and use occur, prices could be above a year earlier late in 1984. The BLS wholesale index is also expected to remain below a year earlier until late spring, and then later this year the index could move slightly above a year earlier.

Milk Prices Expected To Decline

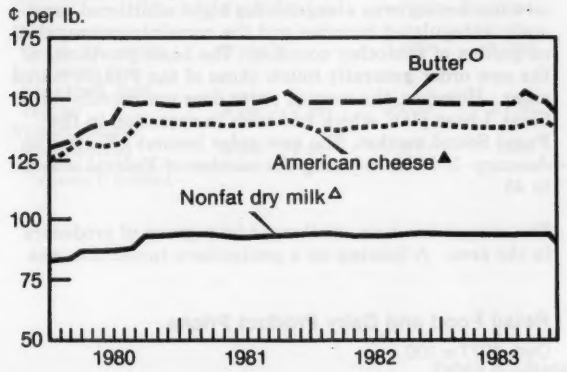
Milk prices received by farmers in December were slightly below a year earlier, resulting from continued surplus production and the lower support price. However, prices were up seasonally from August, reflecting seasonally higher fat content and a higher proportion of fluid use.

Table 4.—USDA purchase prices under dairy price-support programs, 1974-83[1]

Effective date of change	Butter		Nonfat dry milk, extra grade	Natural cheddar cheese, Grade A or higher
	Grade A or higher		Spray	
	Chicago	New York		
	Cents per pound			
4/01/74	60.570	62.00	56.60	70.75
1/04/75	68.070	69.50	60.60	77.25
4/01/75	69.193	70.75	60.60	79.25
10/02/75	79.693	81.25	62.40	85.00
4/01/76	85.817	87.75	62.40	90.50
10/01/76	90.817	92.75	62.40	92.50
4/01/77	100.710	102.75	68.00	98.00
10/01/77	100.710	102.75	68.00	98.00
4/01/78	106.710	108.75	71.00	103.25
10/01/78	111.300	113.50	73.75	106.00
4/01/79	121.800	124.00	79.00	116.00
10/01/79	131.330	134.00	84.00	124.00
4/01/80	140.580	143.25	89.50	132.50
10/01/80	149.000	152.00	94.00	139.50
10/01/81	153.000	156.00	96.50	143.25
10/21/81	149.000	152.00	94.00	139.50
10/01/82	149.000	152.00	94.00	139.50
10/01/83	149.000	152.00	94.00	139.50
12/01/83	143.250	146.25	91.00	134.75

[1]Prices for bulk containers—butter, 64- and 68-pound packages; nonfat dry milk, nonfortified in 50-pounds bags; and cheese, 40- or 60-pound blocks. See DS-387, December 1981, table 3 for earlier data.

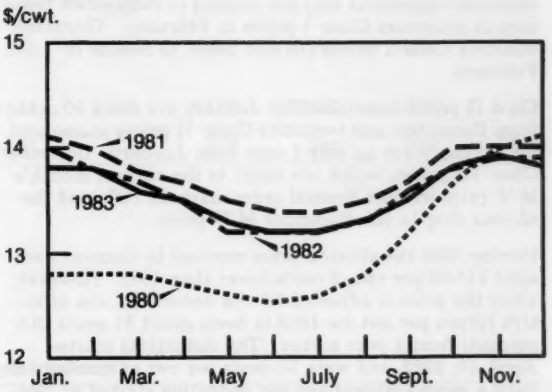
Wholesale Dairy Product Prices



○ Grade AA Chicago. △ High-heat, central-states.
▲ 40-lb. block, Wisconsin assembly points.

USDA Neg. ERS 79-84(1)

All Milk Prices*



*U.S. average price received by farmers for deliveries to plants and dealers.

USDA Neg. ERS 5449-84(1)

December prices for manufacturing grade milk averaged $12.70 per cwt, down 30 cents from both a month and a year earlier. The simple average of reported manufacturing milk prices for 1983 was $12.62, down 4 cents from 1982. The manufacturing grade milk price is likely to decline an additional 20 to 30 cents this winter. During April-June, it likely will be about 50 cents below last year. Then, if a substantial drop in marketings relative to a year earlier occurs, the reported price could move above last year by late summer.

Tne sharp drop in the December Minnesota-Wisconsin (M-W) manufacturing grade milk price, the mover of class prices in all Federal order markets, will result in lower minimum Federal order class prices. The December M-W price was reported at $12.11 per cwt, down from $12.56 in November. This decline will be reflected in minimum Class I prices in February and Class II prices in January. It was reflected in the Class III prices for December. Consequently, the advanced Class I and II pricing procedures will cushion the blend price declines in Federal order markets.

The minimum Federal order Class I price will drop to an estimated $14.26 per cwt in February, down from $14.71 in January and $14.67 in December. For all of 1983,

Table 5.—Milk prices received by farmers, by months, 1980-83

Month	All sold to plants				Manufacturing grade			
	1980	1981	1982	1983	1980	1981	1982	1983
	Dollars per cwt							
January	12.80	14.10	14.00	13.80	11.70	13.00	13.00	12.90
February	12.80	14.00	13.80	13.80	11.70	12.90	12.80	12.80
March	12.80	13.80	13.70	13.60	11.80	12.80	12.70	12.70
April	12.70	13.70	13.50	13.50	11.80	12.70	12.60	12.70
May	12.60	13.50	13.20	13.30	11.70	12.60	12.40	12.50
June	12.50	13.40	13.20	13.20	11.70	12.50	12.30	12.40
July	12.60	13.40	13.20	13.20	11.60	12.40	12.30	12.30
August	12.80	13.50	13.30	13.30	11.80	12.40	12.30	12.20
September	13.20	13.70	13.60	13.50	12.20	12.60	12.60	12.50
October	13.70	14.00	13.80	13.80	12.70	12.90	12.90	12.80
November	14.00	14.00	13.90	13.90	12.90	13.00	13.00	13.00
December	14.10	14.00	13.90	13.80	13.00	13.00	13.00	12.70
Average[1]	13.05	13.76	13.59	13.56	12.05	12.73	12.66	12.62

[1]Simple average of reported monthly prices.

minimum Class I prices in Federal order markets averaged $14.68, up 5 cents from the $14.63 average for 1982.

During January, estimated over-order payments in Federal order markets averaged 50 cents per cwt, down 2 cents from the previous month and 11 cents below January 1983. This was the lowest level of over-order payments since mid-1979. For all of 1983, these payments ranged from 52 to 63 cents and averaged 58 cents, down 3 cents from the average of the previous year. Average over-order payments may not expand to fully offset the drop in minimum Class I prices in February. Therefore, effective Class I prices are also likely to decline in February.

Class II prices announced for January are down 50 cents from December, and tentative Class II prices announced for February are up only 1 cent from January. December Class III prices, which are equal to the current month's M-W price in most Federal order markets, reflected the 45-cent drop in the December M-W price.

During 1983 the all-milk price received by farmers averaged $13.56 per cwt, 3 cents lower than 1982. However, when the price is adjusted for the deductions, the effective return per cwt for 1983 is down about 51 cents (3.8 percent) from a year earlier. The deductions started April 16, 1983, and were 50 cents per cwt on marketings until a second 50-cent per cwt deduction started on September 1. The second 50-cent deduction for September was refundable to those producers who cut their marketings 8.4 percent below the average of September 1981 and 1982 and applied before the end of December for a refund. Likewise, the second 50-cent deduction for October and November is refundable to those producers who make application and had marketings 8.4 percent below the corresponding months in marketings years 1980-81 and 1981-82. Under the new law, the 50-cent deduction on marketings that started December 1 is mandatory and is nonrefundable.

The all-milk price will likely fall 20 to 40 cents by February, given the lower support price under the new law. The all-milk price is expected to be below year-earlier levels through flush; then if a better balance between supply and demand is achieved, it could be even with or above a year earlier late in 1984. The average all-milk price for 1984 may be about equal to 1982 and 1983. The effective all-milk price, with the 50-cent deduction in place for the entire year, may be down slightly from 1983's.

Puget Sound and Inland Empire Combined

After approval by affected producers, the Puget Sound and Inland Empire marketing areas have been combined into a single Puget Sound-Inland marketing area. The new marketing area also includes eight additional previously unregulated counties and the remaining unregulated portion of two other counties. The basic provisions of the new order generally follow those of the Pudget Sound order. However, the merged order does not provide for a Class I base plan, which had been in operation in the Puget Sound market. The new order became effective on January 1, 1984, reducing the number of Federal orders to 45.

The merger has been challenged by a group of producers in the area. A hearing on a preliminary injunction was

Retail Food and Dairy Product Prices

Dec. 1977 = 100

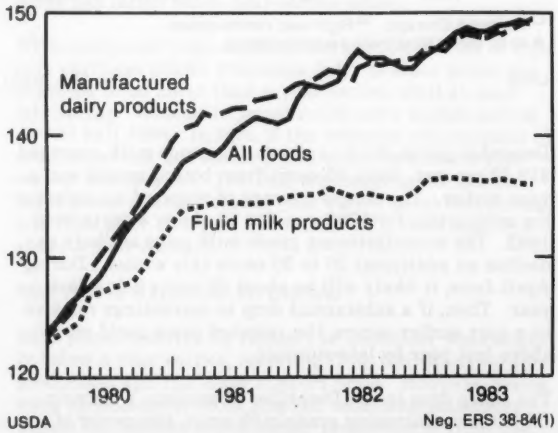


Table 6.—Wholesale dairy product prices and indexes

Item	Unit	Dec. '81	Dec. '82	Avg. '82	May '83	Oct. '83	Nov. '83	Dec. '83	Avg. '83
Butter, A, Chicago	cents/lb	148.12	147.94	147.69	147.25	147.59	147.25	143.14	147.30
Cheese, 40-lb blocks, Wisconsin assembly points	cents/lb	139.41	140.36	138.27	137.38	140.65	140.70	136.72	138.28
Nonfat dry milk, Central States, high heat	cents/lb	93.38	93.38	93.15	93.38	93.38	93.38	91.10	93.19
Wholesale price index (all dairy products)	1967=100	247.2	250.8	248.9	250.9	251.0	251.2	249.2	250.6
Fresh whole milk	1967=100	195.7	199.6	197.9	199.9	199.5	199.5	199.7	199.7
Butter	1967=100	225.7	228.5	226.9	226.4	228.5	228.5	221.0	226.5
Cheese	1967=100	311.9	312.5	313.2	314.1	315.1	315.5	311.3	314.1
Nonfat dry milk	1967=100	464.0	465.1	462.9	462.7	465.2	465.2	452.4	462.4
Ice cream	1967=100	233.9	238.3	235.9	240.6	240.3	240.6	239.8	239.8

Table 7.—Retail dairy product prices

Item	Unit	Oct. 1981	Oct. 1982	Avg. 1982	Apr. 1983	Aug. 1983	Sept. 1983	Oct. 1983	Nov. 1983
Milk, fresh, whole[1]	$ per 1/2 gal	1.124	1.121	1.124	1.133	1.130	1.127	1.120	1.124
Milk, fresh, skim	$ per 1/2 gal	.988	.979	.979	.980	.988	.994	.988	.983
Milk, fresh, lowfat	$ per 1/2 gal	1.060	1.064	1.062	1.082	1.082	1.074	1.056	1.057
Butter, salted, Grade AA, sticks	$ per lb	1.997	2.056	2.046	2.086	2.065	2.071	2.100	2.061
Ice cream, pre-packaged, bulk, regular	$ per 1/2 gal	2.032	2.136	2.102	2.107	2.135	2.193	2.249	2.214
Yogurt, natural, fruit-flavored	$ per 1/2 pt	.511	.508	.503	.505	.525	.533	.529	.520

[1]Vitamin D fortified.

Table 8.—Retail price indexes[1]

Item	Index base	Oct. 1981	Oct. 1982	Avg. 1982	Apr. 1983	Aug. 1983	Sept. 1983	Oct. 1983	Nov. 1983
Consumer price index	1967=100	279.9	294.1	289.1	295.5	300.3	301.8	302.6	303.1
All food	1967=100	277.6	287.0	285.7	291.9	292.2	292.6	292.9	292.5
All dairy products	1967=100	244.6	247.1	247.0	250.1	250.2	250.2	250.1	250.2
Fluid milk and cream	12/77=100	134.7	135.0	135.4	136.6	136.5	136.1	135.9	135.9
Whole milk	1967=100	220.2	220.8	221.4	223.5	223.2	222.6	221.9	222.1
Other	12/77=100	135.2	135.3	135.6	136.7	136.8	136.4	136.6	136.4
Manufactured dairy products	12/77=100	143.3	146.2	145.6	148.1	148.4	149.0	149.2	149.3
Butter	1967=100	247.2	252.6	251.1	253.9	254.2	253.9	256.2	254.8
Cheese	12/77=100	140.9	144.7	143.9	146.5	146.4	146.8	146.7	146.8
Frozen desserts	12/77=100	149.9	150.4	150.4	152.0	152.5	154.0	154.9	155.3
Other	12/77=100	137.0	141.0	140.2	144.5	145.9	146.0	145.2	145.7

[1]For all urban consumers.

held in the District Court for that area on January 9-10. The judge has indicated he would render a decision by mid-February.

Retail Prices Up Slightly

Retail dairy prices during 1983 reflected overabundant supplies. The BLS retail price index for all dairy products stood at 250.2 (1967 =100) in November, up 1.1 percent from a year earlier. Retail dairy prices likely showed a gain of about 1.2 percent in 1983. The BLS retail index for dairy products is projected to range from unchanged to 2 percent higher in 1984. In contrast, retail prices for all food were up about 2 percent in 1983 and a 4- to 7-percent increase is expected in 1984. Thus, dairy products were a relative better buy than most other foods in 1983 and are expected to be a relative better buy in 1984.

PRODUCTION

Production Expansion Continues

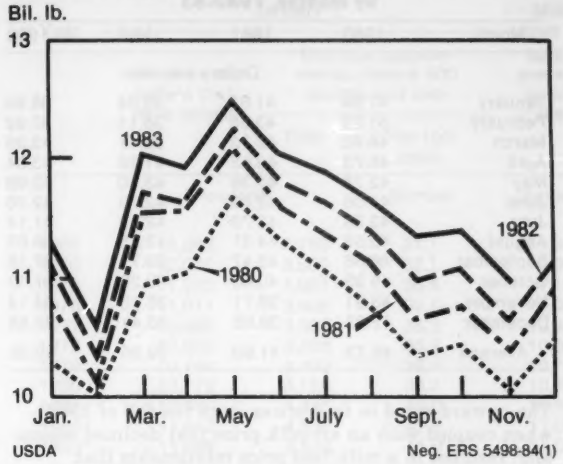
Milk production during 1983 was 138.9 billion pounds, 3.1 billion pounds (2.3 percent) above the 1982 record. Each quarter of 1983 posted an expansion in production. Likewise, production for each month of 1983 was up;

Table 9.—Milk production, milk per cow, and milk cows on farms, by months, 1980-83, with comparisons

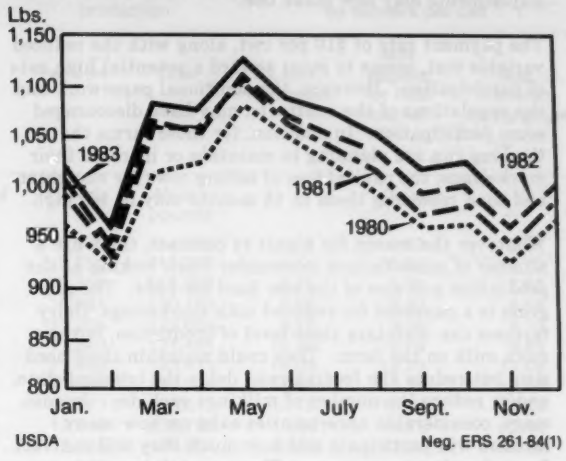
Item	1980	1981	1982	1983[1]	Change from year earlier			
					1980	1981	1982	1983
	Million pounds				*Percent*			
Milk production[2]								
January	10,320	10,805	11,116	11,292	+3.6	+4.7	+2.9	+1.6
February	9,972	10,161	10,391	10,627	+7.4	+1.9	+2.3	+2.3
March	10,945	11,549	11,728	12,036	+3.9	+5.5	+1.5	+2.6
April	11,024	11,555	[3]11,650	11,933	+4.0	+4.8	+0.8	+2.4
May	11,697	12,099	[3]12,248	12,487	+4.0	+3.4	+1.2	+2.0
June	11,335	11,606	[3]11,825	12,033	+3.5	+2.4	+1.9	+1.8
July	11,075	11,387	[3]11,648	11,894	+3.7	+2.8	+2.3	+2.1
August	10,794	11,132	[3]11,375	11,639	+3.7	+3.1	+2.2	+2.3
September	10,353	10,659	[3]10,960	11,309	+3.7	+3.0	+2.8	+3.2
October	10,461	10,768	[3]11,055	11,382	+4.0	+2.9	+2.7	+3.0
November	10,055	10,387	[3]10,645	10,960	+4.5	+3.3	+2.5	+3.0
December	10,494	10,905	[3]11,154	11,325	+4.1	+3.9	+2.3	+1.5
Total[4]	128,525	133,013	135,795	138,917	+4.1	+3.5	+2.1	+2.3
	Pounds				*Percent*			
Milk per cow[2]								
January	958	994	1,008	1,021	+3.8	+3.8	+1.4	+1.3
February	926	934	943	962	+7.4	+0.9	+1.0	+2.0
March	1,016	1,062	1,064	1,087	+3.6	+4.5	+0.2	+2.2
April	1,023	1,061	[3]1,059	1,078	+3.4	+3.7	−0.2	+1.8
May	1,084	1,110	[3]1,113	1,129	+3.3	+2.4	+0.3	+1.4
June	1,050	1,064	[3]1,074	1,087	+2.6	+1.3	+0.9	+1.2
July	1,025	1,044	[3]1,057	1,074	+2.8	+1.9	+1.2	+1.6
August	997	1,018	[3]1,032	1,050	+2.7	+2.1	+1.4	+1.7
September	955	974	[3]993	1,017	+2.8	+2.0	+2.0	+2.4
October	964	982	[3]1,001	1,023	+3.0	+1.9	+1.9	+2.2
November	926	945	[3]963	984	+3.5	+2.1	+1.9	+2.2
December	966	990	[3]1,008	1,020	+3.3	+2.5	+1.8	+1.2
Total[4]	11,889	12,177	12,316	12,531	+3.5	+2.4	+1.1	+1.7
	Thousands				*Percent*			
Milk cows on farms[5]								
January	10,769	10,871	11,023	11,055	−0.2	+0.9	+1.4	+0.3
February	10,773	10,881	11,022	11,051	+0.1	+1.0	+1.3	+0.3
March	10,774	10,879	11,019	11,070	+0.3	+1.0	+1.3	+0.5
April	10,775	10,886	[3]11,000	11,067	+0.5	+1.0	+1.0	+0.6
May	10,789	10,898	[3]11,003	11,064	+0.7	+1.0	+1.0	+0.6
June	10,794	10,906	[3]11,010	11,074	+0.8	+1.0	+1.0	+0.6
July	10,803	10,904	[3]11,020	11,078	+0.9	+0.9	+1.1	+0.5
August	10,829	10,930	[3]11,024	11,080	+1.0	+0.9	+0.9	+0.5
September	10,838	10,949	[3]11,034	11,120	+0.8	+1.0	+0.8	+0.8
October	10,852	10,969	[3]11,045	11,130	+0.9	+1.1	+0.7	+0.8
November	10,858	10,993	[3]11,055	11,137	+1.0	+1.2	+0.6	+0.7
December	10,862	11,011	[3]11,060	11,106	+0.8	+1.4	+0.4	+0.4
Annual average	10,810	10,923	11,026	11,086	+0.6	+1.0	+0.9	+0.5

[1]Preliminary. [2]Excludes milk sucked by calves. [3]ERS derived data consistent with published official USDA quarterly estimates. No monthly data for an individual State or region are available. [4]May not add because of rounding. [5]Excludes heifers not yet fresh.

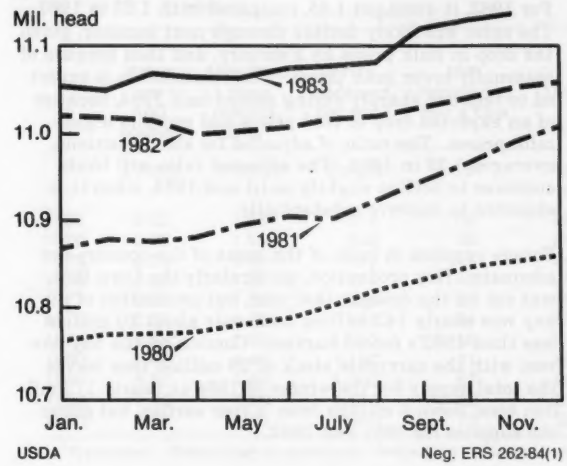
U.S. Milk Production by Months



Milk Production Per Cow



Milk Cows on Farms



December marked the 56th consecutive month of year-to-year increases. Since mid-1979, the additional production has come from gains in cow numbers and in more milk per cow.

Milk output per cow increased by 2.4 and 1.1 percent in 1981 and 1982, respectively. Gains in output per cow continued in 1983; December registered an estimated gain of 1.2 percent over a year earlier. For all of 1983, output per cow was up 1.7 percent from 1982's record 12,316 pounds. However, a decrease is projected in 1984, the first since 1973. The drop will be brought about because producers participating in the diversion program will likely attain some of the marketing reduction through lower feeding rates or other management practices.

The average number of milk cows on farms during 1983 was 11,086,000 up 0.5 percent from 1982, following gains of 0.6 percent in 1980 and about 1 percent in 1981 and 1982. This was the first consecutive 4-year expansion in the average size of the Nation's dairy herd since 1941-44. With the exception of April-June 1982, the quarterly average size of the herd has been expanding each quarter since the second quarter of 1979. However, when compared with a year earlier, the expansion in numbers slowed throughout 1982—from an increase of 144,000 cows during January-March to 62,000 during October-December. Although the slowing of the expansion continued early in 1983, the pattern was not maintained. During the spring, summer, and fall of 1983, the averaged number of cows increased each quarter, and when compared with a year earlier the gains were also larger. In December, however, milk cows on farms dropped sharply. They totaled 11,106,000 head, a drop of 31,000 from November, but still about 46,000 (0.4 percent) more than a year earlier.

Although cow numbers showed month-to-month increases this summer and fall, the decline that occurred during December should continue this winter under provisions of the paid-diversion program. In addition, dairy farmers are expected to cull more intensively because of lower returns for milk, higher feed costs, and better off-farm employment opportunities. As a result, the average number of milk cows on farms is expected to be down substantially in 1984. Therefore, milk production in 1984 is projected to be down, depending upon producer participation in the paid-diversion program, from 2 to 10 percent.

Producer Participation In Diversion Program Uncertain

A great deal of uncertainty exists regarding dairy farmers acceptance and the magnitude of their participation in the paid-diversion program. Dairy farmers will determine if the program is of benefit to their operation in the near term and/or in the long run. While a number of producers are marketing milk below their base, they will determine if additional cuts in their marketings are justified. Likewise, those that have marketings equal to or above their base will determine if the paid-diversion program is of benefit to the operation of their dairy unit. With the support policies now certain, a number of pro-

ducers that were delaying a decision on production adjustments may now make one.

The payment rate of $10 per cwt, along with the reduced variable cost, seems to point toward a potential high rate of participation. However, the additional paperwork and the regulations of the contracts, may have discouraged some participation. In addition, for those farms that in the long run are planning to maintain or increase their marketings, the capital loss of selling cows for slaughter and then replacing them in 15 months may be too high.

Whatever the reason for a unit to contract, there are a number of other factors to consider when looking at the production and size of the cow herd for 1984. The program is a payment for reduced milk marketings. Dairy farmers can maintain their level of production, but use more milk on the farm. They could maintain their herd size, but reduce the feeding rate, delay the breeding date, and/or reduce the number of milkings each day. In summary, considerable uncertainties exist on how many farmers will participate and how much they will contract for under the new program. The uncertainty will be reduced when the signup and dairy farmers' plans are evaluated in February.

Feed Prices Higher

The average farm price for corn rose each month from October 1982 through August 1983. Since August, the corn price has declined some, but the mid-December price of $3.14 per bushel was still nearly 40 percent higher than a year earlier. Likewise, soybeans and soybean meal prices trended upward from October 1982 through late summer. Since September, the bean and meal prices have declined, but the mid-December 1983 average price of soybean meal of $218 per ton was still 18 percent higher than a year earlier. With major ingredients priced higher, the price of 16-percent protein dairy ration also trended upward. On January 1, 1984, the value per 100 pounds of concentrate ration feed was $8.58, a gain of 18 percent from a year earlier. This more moderate gain in the value of concentrate occurred because feed manufacturers have reduced their margins and have not passed on all of the increased ingredient (primarily corn) costs to the dairy farmer.

Table 10.—Milk/16-percent feed price relationship, by months, 1980-83[1]

Mont	1980	1981	1982	1983
		Pounds		
January	1.54	1.39	1.55	1.58
February	1.56	1.39	1.54	1.56
March	1.56	1.41	1.52	1.55
April	1.55	1.39	1.50	1.48
May	1.53	1.35	1.46	1.45
June	1.50	1.36	1.46	1.43
July	1.48	1.40	1.47	1.45
August	1.42	1.43	1.49	1.41
September	1.40	1.48	1.56	1.36
October	1.43	1.53	1.61	1.39
November	1.40	1.56	1.62	1.36
December	1.39	1.54	1.60	1.35
Average	1.48	1.44	1.53	1.45

[1]Pounds of 16-percent protein ration equal in value to 1 pound of milk.

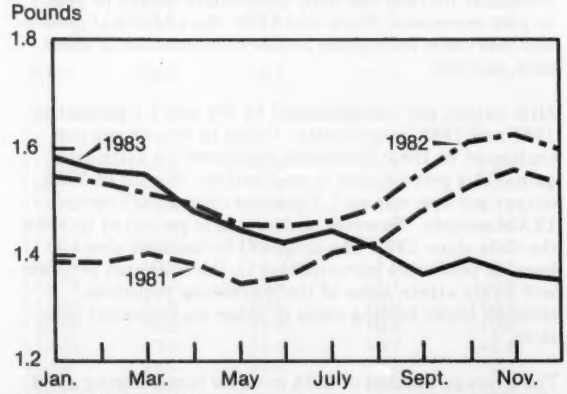
Table 11.—Utility cow prices, Omaha, by months, 1980-83

Month	1980	1981	1982	1983
		Dollars per cwt		
January	47.94	41.61	36.64	36.94
February	51.22	43.65	38.11	40.92
March	48.80	43.12	39.41	42.36
April	45.73	43.95	41.26	43.04
May	42.78	42.39	43.40	42.98
June	44.06	42.88	42.73	42.26
July	43.33	43.78	42.52	41.14
August	45.53	44.31	42.25	39.63
September	46.56	42.47	39.71	37.75
October	45.93	40.60	39.28	37.42
November	43.91	38.71	36.58	34.14
December	42.92	36.65	35.41	33.58
Average	45.73	41.93	39.96	39.35

The upward trend in feed prices since the fall of 1982, when coupled with an all-milk price that declined seasonally, resulted in a milk/feed price relationship that trended lower each month in 1983 until early fall. The ratio has remained nearly unchanged since September. For 1983, it averaged 1.45, compared with 1.53 in 1982. The ratio will likely decline through next summer, given the drop in milk prices by February, and then because of seasonally lower milk prices. The relationship is expected to improve sharply during second-half 1984, because of an expected drop in feed prices and possible higher milk prices. The ratio, if adjusted for the deductions, averaged 1.39 in 1983. The adjusted ratio will likely continue to decline slightly until mid-1984, when it is expected to improve substantially.

Forage supplies in most of the areas of the country are adequate. Hay production, particularly the Corn Belt, was cut by the drought last year, but production of all hay was nearly 143 million tons, only about 10 million less than 1982's record harvest. Combining the hay harvest with the carryover stock of 29 million tons leaves the total supply for the winter of 1984 at nearly 172 million tons, down 6 million from a year earlier, but above the supplies for 1981 and 1982.

Milk/16-Percent Feed Price Relationship*



*Pounds of 16% protein ration equal in value to one pound of milk sold to plants and dealers.

USDA

Neg. ERS 40-84(1)

Table 12.—U.S. milk production and factors affecting supply, selected years, 1965-83

Year	Milk cattle on farms, January 1			Milk cows on farms, average during year	Milk production		Average prices received by farmers per cwt		
	Milk cows and heifers that have calved	Milk cow replacements; heifers 500 pounds and over			Per cow	Total	All milk, wholesale	Milk eligible for fluid market	Milk, manufacturing grade
		Total	Per 100 cows						
	Thousand		*Number*	*Thousand*	*Pounds*	*Million pounds*	*Dollars*		
1965	15,380	4,780	31.1	14,953	8,305	124,180	4.23	4.63	3.34
1970	12,091	3,880	32.1	12,000	9,751	117,007	5.71	6.05	4.70
1975	11,220	4,087	36.4	11,139	10,360	115,398	8.75	9.02	7.63
1976	11,071	3,956	35.7	11,032	10,894	120,180	9.66	9.93	8.56
1977	10,998	3,887	35.3	10,945	11,206	122,654	9.72	9.96	8.70
1978	10,896	3,886	35.7	10,803	11,243	121,461	10.58	10.79	9.65
1979	10,790	3,932	36.4	10,743	11,488	123,411	12.03	12.23	11.09
1980	10,779	4,158	38.6	10,810	11,889	128,525	13.05	13.21	12.05
1981	10,860	4,345	40.0	10,923	12,177	133,013	13.76	13.94	12.73
1982[1]	11,012	4,532	41.2	11,026	12,316	135,795	13.59	13.73	12.66
1983[2]	11,066	4,532	41.0	11,086	12,531	138,917	13.56	13.72	12.62

Year	Dairy ration cost		Milk cow cost		Grain and other concentrates fed to milk cows			Dairy pasture feed conditions, as percent of normal	Alfalfa hay prices	
	Value per 100 pounds	Milk/feed price relationship[3]	Price received per head	Milk required to buy a cow	Total fed	Per cow	Per cwt of milk produced		Received by farmers per ton	Utility cow prices per cwt
	Dollars	*Pounds*	*Dollars*	*Cwt*	*Thousand tons*	*Pounds*	*Pounds*	*Percent*	*Dollars*	
1965	3.03	1.18	212	50	22,827	2,953	36.7	80	25.00	14.44
1970	3.28	1.53	332	58	24,870	3,979	42.4	81	24.70	21.32
1975	6.25	1.31	412	47	24,274	4,357	42.1	79	54.38	21.09
1976	6.30	1.37	477	49	25,083	4,545	41.7	70	60.81	25.31
1977	6.20	1.39	504	52	25,518	4,709	42.1	72	60.57	25.32
1978	6.08	1.53	675	64	26,018	4,803	42.8	76	52.25	36.79
1979	6.68	1.55	1,040	86	27,207	5,070	44.1	82	60.37	50.10
1980	7.42	1.48	1,190	91	28,433	5,260	44.2	70	72.00	45.73
1981	8.02	1.44	1,200	87	28,513	5,220	42.9	79	70.90	41.93
1982[1]	7.45	1.53	1,110	82	29,652	5,380	43.7	83	73.57	39.96
1983[2]	7.89	1.45	1,020	75	30,126	5,435	43.4	77	80.62	39.35

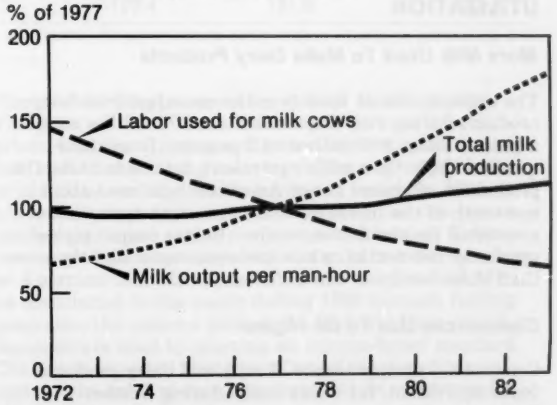
[1]Preliminary. [2]Preliminary or estimated. [3]Pounds of 16-percent protein ration equal in value to 1 pound of milk.

The number of roughage-consuming animal units for 1983/84 is expected to be up slightly from a year earlier. Thus the supply per unit is down 3.5 percent from last year, but remains 18 percent above the average disappearance for the last 4 years. With somewhat reduced supplies and a slightly higher demand, the farm price of hay has been above year-earlier levels. Hay prices are expected to remain higher than a year earlier until late-spring.

Labor Per Cow Continues Decline

Preliminary data for 1982 indicates that the total time required for direct care of the Nation's dairy herd declined from a year earlier. Direct care does not include time used in producing feed, caring for replacement animals, or general overhead. Coupling the decreased time with more cows in the herd, the time per cow also declined in 1982 to about 4.8 minutes per cow per day, down from 5.4 in 1981 and 5.8 in 1980. With less time needed per cow (because of labor-saving technologies) each worker can care for more cows. Thus, given that

Labor Efficiency on Dairy Farms*



*1982 preliminary, 1983 estimated.

USDA

Neg. ERS 8447-84(1)

Table 13.—Production of selected manufactured dairy products with comparisons

Item	Units	Jan.-Sept. 1981	Percent change from 1980	Jan.-Sept. 1982	Percent change from 1981	Jan.-Sept. 1983[1]	Percent change from 1982
Butter	Mil. lb	925.8	+7.0	957.0	+3.4	1,000.7	+4.6
American cheese	Mil. lb	2,023.0	+12.0	2,094.8	+3.5	2,227.8	+6.3
Other cheese	Mil. lb	1,204.4	+2.7	1,303.5	+8.2	1,346.4	+3.3
Cottage cheese[2]	Mil. lb	757.6	−2.6	746.7	−1.4	744.4	−.3
Canned milk	Mil. lb	564.4	+.4	553.3	−2.0	501.5	−9.4
Dry whole milk	Mil. lb	66.4	+9.9	77.9	+17.3	79.5	+2.1
Ice cream	Mil. gal	651.7	−.2	666.9	+2.3	700.2	+5.0
Milk equivalent[3]	Bil. lb	58.7	+6.7	60.7	+3.4	63.6	+4.8
Nonfat dry milk	Mil. lb	1,022.9	+10.1	1,103.7	+7.9	1,198.0	+8.5

[1]Preliminary. [2]Creamed and lowfat. [3]Total reported manufactured products using unrounded data.

Table 14.—Wisconsin out-of-State milk shipments

Month	1981		1982[1]		1983[1]	
	Loads	Volume	Loads	Volume	Loads[2]	Volume[3]
	Number	*Thousand pounds*	*Number*	*Thousand pounds*	*Number*	*Thousand pounds*
January	4	188	57	2,679	13	611
February	7	329	31	1,457	7	329
March	2	94	20	940	1	47
April	0	0	7	329	1	47
May	0	0	15	705	9	423
June	0	0	22	1,034	3	141
July	48	2,256	25	1,175	28	1,372
August	41	1,927	23	1,081	62	3,038
September	118	5,546	68	3,196	258	12,642
October	25	1,175	20	940	57	2,793
November	40	1,880	50	2,350	54	2,646
December	23	1,081	14	658	50	2,450
Total	308	14,476	352	16,544	543	26,539

[1]Changes in marketing practices in the Chicago market and adjacent Federal order markets may affect the comparability of this data. [2]Includes out-of-State skim milk shipments. [3]Average weight of load increased from 47,000 pounds to 49,000 after August 1, 1983.

each cow has additional output, the dairy laborer's efficiency (production per hour of labor) increased about 12 percent in 1982, following gains of 11 percent in both 1980 and 1981. The 1982 level of output per man-hour is more than 150 percent higher than a decade ago.

UTILIZATION

More Milk Used To Make Dairy Products

The amount of milk used to make manufactured dairy products during July-September was 20.3 billion pounds, a gain of about 800 million (4.2 percent) from third-quarter 1982. On a milk-equivalent, fat-solids basis, the production of cheese not of American type used about one-tenth of the increase, while American type cheese accounted for about four-tenths. Butter output picked up nearly two-tenths, while ice-cream used slightly more than three-tenths of the additional milk.

Commercial Use To Be Higher

Commercial disappearance of milk and dairy products (milk-equivalent, fat-solids basis) during October-December 1982 was up 1.6 percent from a year earlier, following a rise of 2.3 percent during the first half of the year and a small gain in the third quarter. For all of 1982, commercial disappearance was 122.5 billion pounds, up 1.6 percent from 1981. The fourth-quarter gain marked the seventh consecutive quarter that use increased from a year earlier.

The pattern of growth was broken in 1983. First-half 1983 commercial disappearance of all milk and dairy products, on a milk-equivalent, fat-solids basis, was down 2 percent from a year earlier. Third-quarter disappearance was down about 1 percent. The declines may have been partly the result of expanded domestic donations. Because of the strong economy, sales probably returned to the year-earlier level during the fourth quarter, leaving yearly disappearance down about 1.2 percent from 1982.

Commercial disappearance of butter during the third quarter of 1983 was up nearly 1 percent from a year earlier, leaving use for January-September down 1.6 percent. American cheese sales continued to be lackluster—in the third quarter they were down about 14 percent from July-September 1982. For the first three quarters of 1983, sales of American type cheese were down about 9 percent. Sales of cheese not of American types were strong in early 1983. Thus, while sales were

Table 15.—Commercial disappearance: Total milk, annual and quarters, 1981-83[1]

Item	1981			1982[2]					1983	
	Quarters		Year	Quarters				Year		
	III	IV		I	II	III	IV	I	II	III
	Billion pounds									
Production	33.2	32.1	133.0	33.2	35.7	34.0	32.9	135.8	34.0	36.5	34.8
Farm use	.6	.6	2.3	.6	.6	.6	.6	2.3	.6	.6	.6
Marketings	32.6	31.5	130.7	32.7	35.1	33.4	32.3	133.4	33.4	35.9	34.2
Beginning commercial stocks	5.9	5.3	5.8	5.4	5.2	5.0	4.6	5.4	4.6	5.0	5.1
Imports	.6	.9	2.3	.4	.6	.6	.9	2.5	.6	.5	.6
Total supply	39.1	37.7	138.8	38.5	40.9	39.0	37.7	141.3	38.6	41.4	39.9
Ending commercial stocks	5.3	5.4	5.4	5.2	5.0	4.6	4.6	4.6	5.0	5.1	5.4
Net removals	2.1	1.6	12.9	4.7	4.9	2.6	2.1	14.3	5.6	5.8	3.1
Commercial disappearance (actual)	31.7	30.6	120.5	28.7	30.9	31.8	31.0	122.4	27.9	30.5	31.4
Percent change[3]	+2.8	+1.1	[4]+1.4	+2.5	+2.1	+0.2	+1.6	+1.6	−2.5	−1.3	−1.1

[1]Milk-equivalent, fat-solids basis. Totals may not add because of rounding. [2]Preliminary. [3]From year earlier, using unrounded data. [4]On a daily average basis.

Table 16.—Commercial disappearance: Selected dairy products, 1974-83[1]

Year	Butter[2]	Cheese		Nonfat dry milk	Canned milk	Frozen products[4]
		American[3]	Other			
		Million pounds				*Million gallons*
1974	929.9	1,780.6	1,276.5	809.9	999.5	1,128.0
1975	951.0	1,717.1	1,331.9	697.0	924.0	1,183.9
1976	919.0	1,920.9	1,458.0	719.2	899.0	1,154.0
1977	859.8	1,958.8	1,512.3	682.2	775.2	1,167.6
1978	903.5	2,064.7	1,655.5	658.4	776.1	1,173.5
1979	895.0	2,113.1	1,730.4	603.1	773.7	1,152.1
1980	878.8	2,023.9	1,827.9	538.9	732.5	1,166.9
1981-1st Qtr.	188.9	528.4	432.5	104.6	177.9	249.0
2nd Qtr.	214.2	518.3	450.4	86.2	159.2	326.5
3rd Qtr.	222.9	544.7	459.8	155.4	167.1	347.7
4th Qtr.	243.2	556.5	532.9	118.0	246.0	244.6
Total	869.2	2,147.9	1,875.6	464.1	750.4	1,167.7
1982-1st Qtr.	211.4	541.3	462.9	105.0	170.6	249.3
2nd Qtr.	217.6	546.1	484.5	75.5	150.1	333.7
3rd Qtr.	217.3	549.4	501.0	147.1	164.7	345.8
4th Qtr.	251.0	528.1	596.2	120.2	230.0	247.5
Total	897.3	2,165.0	2,044.6	447.8	715.3	1,176.2
1983-1st Qtr.[5]	208.3	459.2	496.2	109.0	163.3	263.2
2nd Qtr.	208.5	558.4	496.5	111.2	153.0	348.4
3rd Qtr.	219.0	473.3	498.3	129.4	131.9	369.6

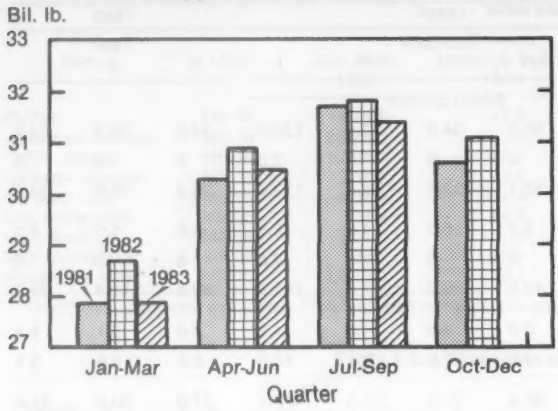
[1]Total may not add because of rounding. [2]Imports include butter-equivalent of butteroil. [3]Imports include colby cheese; stocks do not include processed cheese. [4]Excludes Mellorine. [5]Preliminary.

down slightly during the third quarter, for the first 9 months they were up about 3 percent.

During January-November 1983, fluid milk sales in Federal order markets were about unchanged from the same period in 1982. Sales were particularly strong during the July-November period, when overall fluid milk use rose almost 1 percent. Fluid milk sales have been trending down for a number of years, averaging 1 percent below a year earlier in both 1981 and 1982. During the first 11 months of 1983, sales of lowfat and skim milk items rose 3 percent, while whole milk items declined 2.3 percent from year-earlier levels. Whole milk sales accounted for slightly more than half of total fluid milk sales in Federal order markets during January-November 1983.

Commercial disappearance is expected to rise in 1984. The gain will result from little or no increase in retail prices (thereby allowing real prices of dairy products to fall) and from a strong recovery in the economy, which would allow real disposable income to increase. With a lower real price, higher real income, and the new promotion program, per capita use is expected to rise. Taking into account a larger population, a gain in total use of up to 3 percent could be expected. While surplus food will be distributed to the needy during 1984 through feeding programs, the persons getting the food will be required to demonstrate need by meeting an income-based standard. Thus, it is expected that the effect of the donations on commercial sales of dairy products will be substantially eliminated.

Commercial Disappearance of Milk in All Products*



*Milk equivalent.

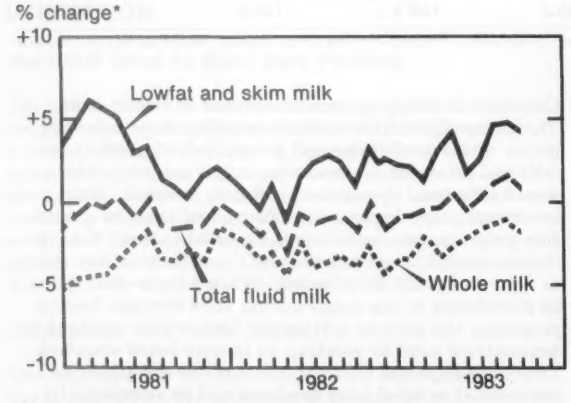
USDA Neg. ERS 2075-84(1)

Table 17.—January-September dairy sales, selected products

Item	1982	1983	Change
	Million pounds		
Total milk[1]	91,390.0	89,901.0	−1.6
Manufactured products:			
American cheese	1,636.8	1,490.9	−8.9
Other cheese	1,448.4	1,492.1	+3.0
Cottage cheese[2]	746.7	744.4	−.3
Butter	646.3	635.8	−1.6
Ice cream	666.9	700.2	+5.0
Ice milk	226.1	242.3	+7.2
Canned milk	485.4	448.2	−7.7
Nonfat dry milk	327.6	349.6	+6.7
Fluid products[3]			
Whole milk	14,076	13,738	−2.4
Skim and lowfat milk	11,363	11,693	+2.9

[1]On a milk-equivalent, fat-solids-basis. [2]Creamed and low-fat. [3]Based on January-September Federal order data, percent change adjusted for calendar composition and seasonally.

Daily Average Sales of Fluid Milk Items



*From year earlier. Adjusted for calendar composition.

USDA Neg. ERS 2705-83(9)

Commercial Stocks Larger

Total commercial dairy stocks on October 1, 1983, were 5.4 billion pounds (milk-equivalent, fat-solids basis), up about 850 million pounds from a year earlier. Based on cold-storage holdings, the January 1 milk-equivalent commercial stocks were about 5.1 billion pounds, down nearly 300 million from October 1, but still 500 million more than a year earlier.

Commercial holdings of butter on October 1 were up about 30 percent from 1982. The trade increased its holdings of butter from October 1 to January 1 during both 1982 and 1983, but compared with a year earlier, they did not increase stocks as much in 1983, leaving stocks on January 1, 1984, up 20 percent from January 1, 1983.

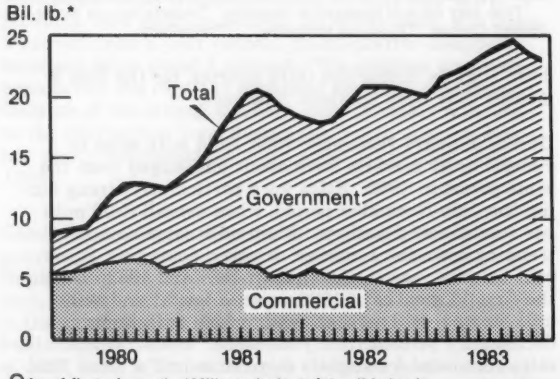
American cheese stocks held by trade were 20 percent higher than a year earlier on October 1, 1983. During

Table 18.—Dairy product stocks, October 1, 1981-83

Item	1981	1982	1983
		Million pounds	
Commercial:			
Butter	31.9	23.2	30.1
American cheese	374.5	318.1	384.0
Other cheese	95.7	99.2	114.2
Nonfat dry milk	87.2	89.8	69.7
Milkfat	185.1	164.4	192.2
Solids-not-fat	247.1	238.7	238.1
Milk-equivalent, fat-solids basis	5,255.2	4,569.2	5,421.3
Government:			
Butter	457.6	486.8	525.2
American cheese[1]	511.9	636.9	824.8
Nonfat dry milk	721.8	1,150.3	1,349.4
Milkfat	533.2	597.1	688.5
Solids-not-fat	853.7	1,303.3	1,552.2
Milk-equivalent, fat-solids basis[1]	14,558.2	16,346.9	18,996.3

[1]Does not include processed American cheese stocks held by CCC.

Dairy Product Stocks:○ Milk Equivalent Fat Solids Basis, Beginning Jan. 1



○As of first of month. *Milk equivalent, fat-solids basis.

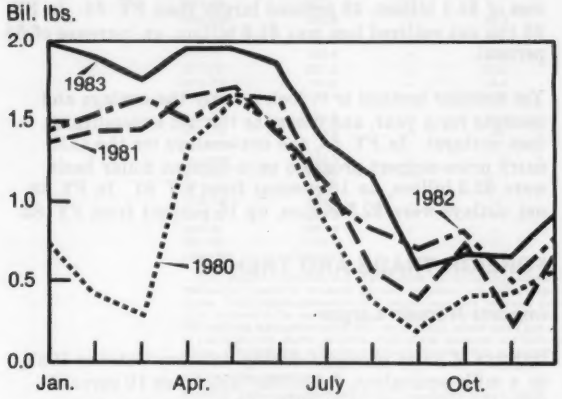
USDA Neg. ERS 8448-84(1)

Table 19.—USDA dairy purchases, with comparisons[1]

Item	January-December		
	1982	1983	Change
	Million pounds		*Percent*
Butter	382.0	413.2	+8.2
American cheese	642.5	832.8	+29.6
Nonfat dry milk	948.1	1,061.0	+11.9
Evaporated milk	20.8	24.6	+18.3
Milk-equivalent, fat-solids basis	14,281.6	16,813.5	+17.7

[1]Deliveries minus unrestricted sales.

USDA Dairy Product Purchases*



*Net removals, milk equivalent, fat-solids basis.

USDA Neg. ERS 8449-84(1)

fall 1982, the trade increased its holdings 5 percent; during 1983 it decreased stocks 6 percent. As a result, American type cheese stocks on January 1, 1984, were up only 8 percent from a year eariler. Other than American type cheese stocks were 15 percent more on October 1, 1983, than the same date in 1982. On January 1, 1984, they were nearly 30 percent larger, the result of a slower 1983 drawdown in holdings by the trade than in 1982.

Milk-equivalent stocks held by USDA on October 1, 1983, totaled 19 billion pounds, an increase of 2.6 billion (16 percent) from a year earlier. January 1, 1984, milk-equivalent Government stocks were about 17.4 billion pounds, down 8 percent from the October 1, 1983, holdings, but still 1.9 billion (13 percent) larger than a year earlier. Government holdings of cold-storage butter declined from October 1, 1983, to January 1, 1984, by about 12 percent, but remained 5 percent larger than a year earlier.

Likewise, American cheese cold-storage holdings declined about 4 percent from October 1 to January 1. On October 1, 1983, Government holdings of natural American cheese were about 70 percent larger than a year earlier, while the January 1, 1984, inventory was only 34 percent larger. However, it should be noted that the Government-owned stocks of process American cheese are not included. If they were, the stocks of Government cheese would still be down 4 percent from October 1, 1983, to January 1, 1984. However, when compared with a year earlier, the January 1 inventory would be 23 percent larger, while the October 1 stocks would be 29 percent larger.

Government stocks on January 1, 1984, are larger, despite the large level of donations, because of heavy purchases during 1983. Stocks on January 1, 1985, are expected to be smaller because CCC program uses of dairy products are expected to be more than purchases.

Record Large CCC Purchases

During marketing year 1982/83 (October-September), CCC net purchases under the dairy price-support program equaled a record 16.6 billion pounds on a milk-equivalent, fat-solids basis, compared with 13.8 billion a year earlier. For the 1982/83 year, CCC made net purchases of 410 million pounds of butter, 820 million of cheese, and 1,047 million of nonfat dry milk. Net purchases are total purchases less sales back to the trade for unrestricted use.

The CCC uncommitted inventory of dairy products remains high; however, they are expected to decline in 1984. On September 30, 1983, CCC's uncommitted inventory of butter totaled 391 million pounds, a decline of only 3 percent from a year earlier. During 1982/83 commitments for program uses (school lunch, needy persons, P.L. 480, Section 416, etc.) totaled 422 million pounds, only 12 million more than net butter purchases. The butter uncommitted inventory on January 1, 1984, was about 12 percent below a year earlier and October 1, 1983. This drop is expected to continue in 1984 as program uses are likely to be about even with 1982/83, while net purchases are less.

Uncommitted cheese stocks on September 30, 1983, equaled nearly 903 million pounds, up about 78 million (9.4 percent) from September 30, 1982. Program commitments by CCC totaled 742 million pounds during 1982/83 and are expected to be nearly as large this year. The CCC's uncommitted inventory on January 1 was 838 million, down 7 percent from October 1, but still 8.5 percent above a year earlier. The uncommitted inventory of cheese is expected to be below year-earlier levels by late summer.

The CCC uncommitted inventory of nonfat dry milk on September 30, 1983, at 1.35 billion pounds, was 14 percent larger than a year earlier. During the 1982/83 marketing year 878 million pounds of product was used, about 170 million less than purchases. Program uses of nonfat dry milk this year are expected to be much larger and more than two times purchases.

USDA net removals during calendar year 1982 were 14.3 billion pounds (milk-equivalent, fat-solids basis), compared with 12.9 billion in 1981, an increase of 11 percent. With milk production higher and commercial disappearance lower in calendar year 1983 than in 1982, net purchases by the USDA were a record 16.8 billion pounds, an increase of 17 percent.

Table 20.—Uncommitted CCC stocks, selected dates, 1980-84

Date	Butter	American cheese	Nonfat dry milk	Milk-equivalent, fat-solids basis
	Million pounds			*Billion pounds*
Dec. 1, 1980	273.7	196.8	532.4	7.6
Dec. 1, 1981	205.7	553.6	843.9	9.7
Mar. 1, 1982	306.2	584.6	920.3	12.1
July 1, 1982	435.6	762.3	1,085.5	16.5
Dec. 1, 1982	378.4	786.0	1,216.5	15.6
Mar. 1, 1983	427.5	746.4	1,178.0	16.2
July 1, 1983	472.9	865.6	1,296.1	18.3
Nov. 1, 1983	329.2	898.8	1,355.2	15.7
Dec. 1, 1983	363.1	853.9	1,365.7	15.9
Jan. 1, 1984	341.7	838.3	1,372.3	15.3

Purchases in both marketing year 1983/84 and calendar year 1984 are expected to be lower because of less marketings and higher commercial disappearance.

Dairy Support Costs Higher

Several ways exist to compute the costs of the dairy price-support program. One method measures the within year supply and demand balance by looking at the total cost of net purchases. In FY 82, these total costs were $2.3 billion, up 15 percent from FY 81. In FY 83 they were $2.7 billion. Under the new law, the net purchase costs are projected at $0.7 to $1.9 billion in FY 84 and $1.0 to $1.6 billion in FY 85. But this method has some problems. Previously, total cost of net purchases were the CCC costs; however, under the new law, that is no longer true. In terms of CCC costs, the total cost of net purchases should be adjusted downward for the deductions and increased by the diversion payments. Thus, in FY 83 the CCC costs were $2.5 billion, because the deductions collected during FY 83 from dairy farmers' returns from April 16 through September 30 were about $254 million. Under the new law, this measure of within year supply-demand balance is projected to be $1.3 to $1.8 billion in FY 84 and $1.9 to $2.3 billion in FY 85, compared with $2.5 in FY 83 and $2.3 billion in FY 82.

Another method is to maintain a record of the purchase price plus the processing and packaging cost of each product unit removed from the market, and then to use that as the unit's cost as it is sold or donated. Using this method—which values at cost the inventory from which disposals are made (plus the cost of storage, handling, and transportation, less the proceeds from sales)—the dairy price-support program in FY 82 had a net realized loss of $1.1 billion, 49 percent larger than FY 81. In FY 83 the net realized loss was $1.8 billion, an increase of 54 percent.

Yet another method is to look at only the outlays and receipts for a year, and compute the net expenditures (net outlays). In FY 82, the net outlays for the CCC dairy price-support program on a current dollar basis were $2.2 billion, up 15 percent from FY 81. In FY 83 net outlays were $2.5 billion, up 16 percent from FY 82.

FOREIGN TRADE AND TRENDS

Imports Remain Larger

Imports of dairy products during January-October 1983, on a milk-equivalent, fat-solids basis, rose 10 percent from the same period in 1982. Cheese imports were up about 15 percent, while other dairy products were down 9 percent, on a fat-solids basis. During the first 10 months

Table 21.—Dairy products removed from the commercial market by USDA programs, marketing years, 1970-82[1]

Marketing year[2]	Net removals[3]						Solids content of removals			
	Butter[4]	Cheddar cheese	Dry whole milk	Evaporated milk	Nonfat dry milk[5]	Milk equivalent	Milk-fat	Solids-not-fat	As a percentage of marketings	
									Milk-fat	Solids-not-fat
	Million pounds					*Bil. lb*	*Million pounds*		*Percent*	
1970	305.4	56.8		79.0	452.3	7.2	273.5	469.9	6.6	4.9
1971	262.4	87.0	0.6	102.0	463.5	6.6	250.7	494.1	5.9	5.0
1972	220.2	20.1	1.5	81.2	259.9	5.0	192.4	274.1	4.5	2.8
1973	26.1	4.9	3.4	50.0	41.6	.7	27.7	53.2	.7	.6
1974	66.9	93.5	.9	33.7	393.6	2.4	89.6	414.8	2.2	4.3
1975	26.1	33.3		24.5	274.8	.9	35.6	279.3	.9	2.9
1976	114.9	96.9		16.5	186.4	3.4	126.3	213.3	2.9	2.1
1977[6]	133.9	87.4		9.7	345.5	3.6	139.1	362.4		
1977	134.6	41.6		17.4	338.5	3.2	125.5	342.9	2.9	3.4
1978	46.2	12.1		17.4	202.5	1.1	43.9	202.1	1.0	2.0
1979	233.0	335.6		15.4	592.2	8.2	301.0	678.2	6.6	6.3
1980	382.1	532.1		20.2	786.9	12.7	465.4	928.1	9.9	8.3
1981[7]	381.9	598.6		19.5	953.6	13.8	508.4	1,109.1	10.5	9.7
1982[7]	410.3	820.3		22.4	1,047.2	16.6	603.5	1,268.2	12.1	10.9

[1]For earlier years see DS-387, December 1981, table 10. [2]Start of marketing year April 1, 1965-77, October 1, 1977 to present. [3]Delivery basis after domestic unrestricted sales. Includes purchases of butter, cheese, evaporated milk, and nonfat dry milk under Section 709 and Section 4(a). [4]Includes butter equivalent of anhydrous milk-fat and payment-in-kind (PIK) purchases. [5]Includes PIK certificates issued; beginning January 1972, also includes Title I exports originating from private stocks. [6]April-September transition period. [7]Preliminary.

Table 22.—Net Government expenditures on dairy support and related programs, fiscal years, 1950-83

Year beginning July 1	Net support purchases[1]	Military milk[2]	Section 32[3]	Section 709[4]	Section 4(a)[4]	Export assist-ance[5]	Total (excluding special milk)	Special milk program[6]
				Million dollars				
1949-50	170.5	—	17.6	—	—	—	188.1	—
1950-51	[7]—49.1	—	[8]—.9	—	—	—	[7]—50.1	—
1951-52	1.6	—	7.5	—	—	—	9.1	—
1952-53	274.9	—	25.1	—	—	—	300.0	—
1953-54	400.4	—	74.0	—	—	—	474.4	—
1954-55	228.7	4.3	24.4	—	—	—	257.4	22.2
1955-56	237.9	7.3	39.0	—	—	—	284.2	48.2
1956-57	239.1	16.4	75.6	—	—	—	331.1	61.0
1957-58	205.9	30.4	123.7	—	—	—	360.0	66.7
1958-59	102.1	23.0	106.2	—	—	—	231.2	74.7
1959-60	159.5	23.6	35.1	—	—	—	218.2	81.2
1960-61	173.9	25.3	82.1	—	—	—	281.3	87.0
1961-62	539.0	25.9	47.1	—	—	—	612.0	91.7
1962-63	454.0	24.6	—	—	—	6.7	485.5	93.7
1963-64	311.7	26.5	4.4	—	—	36.5	379.1	97.1
1964-65	157.2	26.2	105.6	—	—	44.7	333.7	88.5
1965-66	26.1	—	38.7	—	—	3.8	68.6	97.0
1966-67	283.9	—	.5	14.2	—	18.4	317.4	96.1
1967-68	357.1	—	—	—	—	7.1	364.2	103.1
1968-69	268.8	—	45.4	—	—	13.1	327.3	101.9
1969-70	168.6	—	107.1	7.8	—	7.4	290.9	102.9
1970-71	315.4	—	91.6	3.2	—	11.6	421.8	91.8
1971-72	267.0	—	63.9	—	—	7.3	338.2	93.6
1972-73	135.8	—	15.4	0.1	—	1.5	152.8	90.8
1973-74	31.4	—	10.8	13.7	15.0	—	70.9	50.2
1974-75	485.8	—	6.5	—	3.8	—	496.1	122.9
1975-76	69.6	—	4.1	—	2.8	—	76.5	144.0
Transition quarter*	43.5	—	1.0	—	—	—	44.5	25.5
1976-77	709.8	—	—	—	4.5	—	714.3	109.7
1977-78	446.4	—	—	—	5.0	—	451.4	137.8
1978-79	244.3	—	—	—	6.3	—	250.6	134.1
1979-80	1,274.0	—	—	—	5.8	—	1,279.8	156.8
1980-81	1,967.2	—	—	—	7.5	—	1,974.7	118.8
1981-82	2,231.3	—	—	—	7.9	—	2,239.2	28.1
1982-83	[9]2,592.0	—	—	—	8.4	—	2,600.4	20.1

[1]CCC support purchases and related costs (for processing, packaging, transporting, and storing) of dairy products, less proceeds from sales to commercial buyers for domestic use and for export, U.S. military agencies, foreign government and private welfare agencies, and Section 32 programs. [2]CCC reimbursements to U.S. military agencies, Veterans' Administration and other participants. [3]Expenditures of Section 32 funds to buy dairy products in the market and from CCC for school lunch and welfare uses. [4]Purchases of dairy products at market prices under Section 709 of the Food and Agriculture Act of 1973, for domestic school lunch and welfare uses. [5]Value of payment-in-kind certificates issued by CCC on exports of nonfat dry milk, butter, and other high-milkfat products, and CCC cost of exports under Title I, P.L. 480 of dairy products not originating in CCC stocks. [6]Expenditures under the program to increase milk consumption by children in schools, child-care centers, and similar institutions. [7]Net receipt due to sales exceeding purchases. [8]Receipt due to adjustment. * Start of fiscal year moved to October 1 in 1976. [9]Reduced $253.8 million for milk marketing deductions.

SOURCE: Agricultural Stabilization and Conservation Service, USDA.

Table 23.—USDA expenditures for dairy products, fiscal year ending September 30, 1983

	Value							Quantity			
	Butter and butter products	Cheese		Nonfat dry milk	Condensed and evaporated milk	Milk deductions collected	Total	Butter and butter products	Cheese		Nonfat dry milk
		American	Moz.						American	Moz.	
				Million dollars							*Million pounds*
CCC outlays											
Purchases	614.4	1,130.9	42.3	928.4			2,716.0	409.5	766.1	30.9	979.7
Storage, handling	21.0	38.3	—	19.9			79.2				
Transportation	14.4	31.7	—	24.0			70.1				
Processing, packaging	[1]50.2	46.1	—	10.3			106.6				
Total carrying charges	85.6	116.1	—	54.2			255.9				
Total outlays	700.0	1,247.0	42.3	982.6			2,971.9				
Proceeds											
Dollar Sales	19.5	10.6	—	57.0			87.1	41.2	21.3	—	138.6
Military and barter sales	3.8	0.2	—	5.3			9.3	4.1	0.6	—	15.3
P.L. 480, Title II	1.5	1.0	—	15.7			18.2	30.0	19.7	—	314.1
Transferred to CSM-WSM	—	—	—	[2]40.1			40.1	—	—	—	43.1
Transferred to butteroil	[1]30.8	—	—	—			30.8	17.4	—	—	—
Other receipts	0.8	2.3	—	1.4			4.5	0.4	2.4	—	0.6
Milk marketing deductions	—	—	—	—		253.8	253.8				
Total	56.4	14.1	—	119.5		253.8	443.8	93.1	44.0	—	511.7
Expenditures											
CCC net expenditures	643.6	1,232.9	42.3	863.1		(253.8)	2,526.1				
Section 4(a)	—	—	—	—	8.4		8.4				
P.L. 480, Title II	1.5	1.0	—	[3]22.8	—		25.3				
Unrecovered cost transferred to CSM-WSM	—	—	—	38.6	—		38.6				
USDA net expenditures	645.1	1,233.9	42.3	924.5	8.4	(253.8)	2,600.4				

[1]Includes $30.8 million cost of butter used in the manufacture of butteroil. [2]Includes $30.7 million cost of NDM used in the manufacture of CSM and WSM. [3]Includes $2.2 million Title II NDM sales proceeds included in CSM and WSM.

SOURCE: Agricultural Stabilization and Conservation Service, USDA.

Table 24.—Commodity Credit Corporation, net realized losses (expense) and net expenditures for dairy price support, fiscal 1982 and 1983

Item	Fiscal 1982		Fiscal 1983	
	Expense	Outlays	Expense	Outlays
		Million of dollars		
Expense/gross outlay:				
Purchases		2,282,446		2,716,025
Storage and handling	58,054	58,054	79,209	79,209
Transportation	54,685	54,685	70,102	70,102
Processing and packaging		30,321		74,564
Sales (cost basis)	699,010		612,936	
Domestic donations (cost basis)	535,824		1,349,143	
Export donations (cost basis)			10,668	
Other expense or outlays	180	180	32,006	32,006
Subtotal	1,347,753	2,425,686	2,154,064	2,971,906
	Income	Receipts	Income	Receipts
Offsetting income/receipts:				
Proceeds from sales	−211,309	−211,309	−118,516	−118,516
Net transfers to blended foods		−31,930		−40,058
Other income or receipts	−266	−266	−31,375	−31,375
Milk marketing fees collected			−253,849	−253,849
Subtotal	−211,575	−243,505	−403,740	−443,798
Net realized loss or net expenditures	1,136,178	2,182,181	1,750,324	2,528,108

Note: Expense items minus income items equal net realized loss (expense concept), and gross outlay items minus receipt items equal net expenditures (expenditure concept).

SOURCE: Agricultural Stabilization and Conservation Service, USDA.

Table 25.—U.S. dairy trade, milk-equivalent, fat-solids basis, 1980-83

Year and quarters	Imports		Exports	Shipments[1]
	Cheese	Other		
	Million pounds			
1980				
1st	224	142	108	135
2nd	321	36	88	139
3rd	489	18	75	142
4th	832	47	99	146
Year[2]	1,866	243	370	562
1981				
1st	306	98	85	162
2nd	393	77	528	138
3rd	451	127	706	155
4th	809	68	1,777	131
Year[2]	1,960	370	3,096	586
1982				
1st	359	62	1,558	153
2nd	439	126	938	157
3rd	538	43	592	129
4th	792	117	846	163
Year[2]	2,128	348	3,935	602
1983				
1st	512	121	500	152
2nd	493	45	870	158
3rd	532	44	731	130

[1]To U.S. territories. [2]May not add because of rounding.

of 1983, imports of quota-type cheese increased 10 percent (product-weight basis) and nonquota types were up 26 percent. Total quota cheese imports for January-October equaled about 90 percent of the fixed annual level allowed for all of 1983. Casein (milk protein) imports were about 9 percent below a year earlier, while lactose (milk sugar) were up by 16 percent.

Exports of U.S. dairy products during January-September were equal to about 2.1 billion pounds of milk, down by nearly one-third from 1982. The drop is reflecting the effect of the 1981 New Zealand butter sale, that resulted in large milk equivalent exports during the first-quarter of 1982. Exports were up nearly 5 percent for the second and third quarters. Shipments on a milk-equivalent basis were unchanged from a year earlier during January-September 1983.

World Situation and Outlook[1]

Considerable uncertainty currently surrounds international dairy product markets. Even if world economic conditions improve in 1984, the overall outlook is for production of dairy products to grow faster than use. Thus, there is little optimism for strengthening in international dairy product prices over the next several months.

Cow's milk production is up significantly for the world. In the 37 major dairy countries, the combined output is

[1]Prepared by William Paddock, Livestock and Dairy Division, FAS, USDA, (202) 382-1347.

Table 26.—Dairy products: U.S. imports, quota and nonquota, total 1982 and January-October, 1982-83[1]

Product	Calendar year quota	1982 Imports	October			Cumulative, January-October		
			1982	1983	1983 as a % of 1982	1982	1983	1983 as a % of 1982
	Thousand pounds				*Percent*	*Thousand pounds*		*Percent*
Cheese, quota types								
American								
-cheddar	12,205.3	[4]12,682	874	1,425	163	9,168	10,601	116
-other	7,545.4	5,163	395	603	153	3,877	7,055	182
Italian								
-original loaves	12,374.4	12,139	1,579	647	41	9,280	9,315	100
-Other	1,550.0	1,436	179	17	9	1,344	1,062	79
Edam and Gouda								
-natural	9,208.6	8,459	515	1,004	195	6,953	6,666	96
-processed	3,151.3	2,955	231	791	342	2,083	2,161	104
Blue mold	5,469.6	5,096	601	458	76	4,178	4,933	118
Swiss								
-Emmenthaler	70,278.1	67,193	5,994	5,770	96	53,544	54,526	102
-Gruyere process	16,479.0	14,848	1,830	1,484	81	11,051	12,764	115
Other								
-over 0.5% fat	89,466.8	87,996	7,473	8,114	109	53,620	62,691	117
-under 0.5% fat	12,621.1	12,249	677	1,071	158	9,118	8,159	89
Total	240,349.6	230,216	20,347	21,386	105	164,216	179,933	110
Cheese, nonquota types								
Other cow's milk cheeses[2]		14,724	1,533	1,717	112	11,398	14,054	123
Miscellaneous[3]		1,201	113	162	143	960	1,188	124
Pecorino		22,291	2,481	2,417	97	16,506	21,343	129
Roquefort		910	82	81	99	725	824	114
Total		39,127	4,209	4,376	104	29,589	37,408	126
Total cheese, Quota and Nonquota	240,349.6	269,343	24,556	25,762	105	193,806	217,342	112
Other quota products								
Butter	707.0	[4]1,746	205	168	82	[4]1,426	[4]1,363	96
Butteroil	1,200.0	1,200	0	0	0	1,200	1,200	100
Butterfat mixtures	2,580.0	2,335	0	35	(5)	98	71	72
Ice cream	3,377.3	0	0	0	0	0	0	0
Frozen cream	12,540.0	[4]15,133	1,902	1,944	102	12,144	9,974	82
Nonfat dry milk	1,807.0	[4]1,935	101	100	99	1,363	1,575	116
Dried buttermilk and whey	496.0	355	42	0	(5)	181	160	88
Evaporated milk	1,312.0	[4]4,036	406	668	165	[4]3,526	[4]6,080	172
Condensed milk	4,079.0	3,129	1,327	34	3	3,109	731	24
Chocolate crumb								
-regular	21,409.2	18,825	2,545	832	33	16,291	14,402	88
-lowfat	4,680.0	740	12	120	1,000	620	1,252	202
Animal feed with milk solids	16,300.0	15,948	1,934	768	40	12,921	13,585	105
Non-quota products								
Casein		176,752	13,459	16,881	125	142,819	130,654	91
Lactose		1,050	75	120	160	792	918	116
Milk equivalent, fat solids basis, total all products	2,234,270	4/2,476,760	236,202	235,665	100	1,804,428	1,982,925	110

[1]Preliminary. [2]Primarily soft, ripened cheeses. [3]Gjetost, Bryndza, Gammelost and Noekkelost, and Goya. [4]Probable error in reported data.

SOURCE: U.S. Department of Commerce, Bureau of the Census.

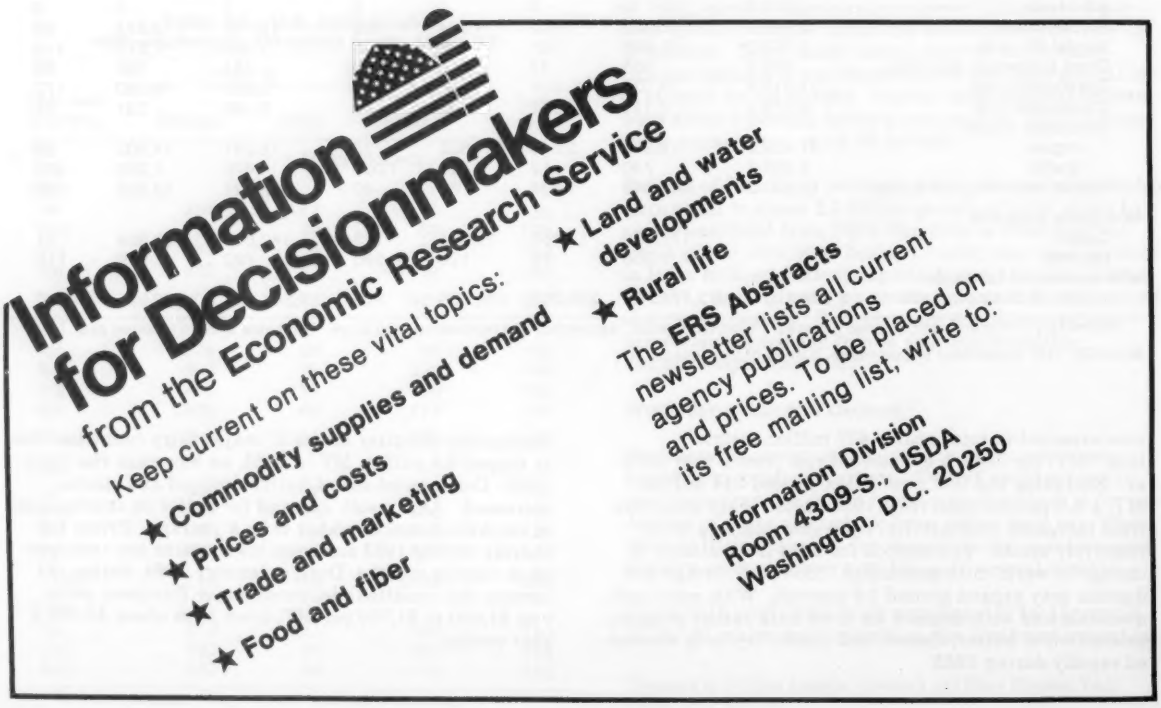
now expected to total nearly 407 million metric tons (MT) for 1983, a 3.4-percent rise from a year earlier. Excluding the U.S. production totaled 344 million MT, a 3.6-percent gain from 1982. Most of the gain was from increased productivity, since cow numbers were relatively stable. The outlook for 1984 is for almost no change in world milk production. However, foreign production may expand around 1.5 percent. With more milk available and with demand for fluid milk rather sluggish, production of butter, cheese, and nonfat dry milk expanded rapidly during 1983.

Production of butter in the 37 major dairy countries likely topped 6.9 million MT in 1983, an 8-percent rise from 1982. Commercial use of butter declined and stocks increased. As a result, demand for butter on international markets is much weaker than a yearago. Prices fell sharply during 1983 and even lower prices are anticipated in coming months. During January 1984, butter (82 percent fat, unsalted) delivered major European parts was $1,500 to $1,700 per MT, down from about $2,000 a year earlier.

Nonfat dry milk production for 1983 may total over 4.9 million MT in the 37 major dairy countries, and like butter, is expected to register a large gain in 1984 from a year earlier—about 10 percent. Stocks have accumulated rapidly; prices are weak, but are expected to stabilize over the near term. During January, nonfat dry milk delivered to European parts was $660 to $725 per MT, down from January 1983 of $815 to $880.

In 1983, worldwide production of cheese increased, but at a growth rate slower than in 1982. In total, output likely reached 9 million MT, up only 2 percent from 1982. Output rose around 4.5 percent in 1982. Competition on international markets intensified during the latter part of 1982 and continued keen in 1983. Prices suffered during 1983, with increased production and building stocks, but they should stabilize this year. Cheese (depending on age and quality) during January 1983 delivered to major parts in Europe was $1,650 to $1,700 per MT, while this year its was $1,000 to $1,500.

Output of casein for the 10 major producing countries rose nearly 20 percent during 1983, as excess skim milk supplies were converted into casein. Weakness in export demand for nonfat dry milk helped stimulate the sharp rise in production. Although casein exports were rising, they did not keep pace with the gain in output. As a result, world stocks rose sharply by year's end.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NATIONAL AND REGIONAL COSTS AND RETURNS OF PRODUCING MILK

by

Richard Fallert,
Tim Ulrich,
and
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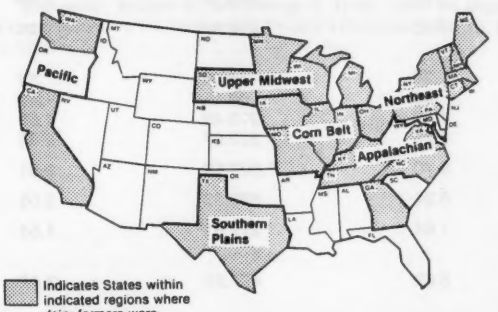
Abstract: For 1983, total cash expenses for the U.S. dairy enterprise are forecast to have averaged about $10.23 per cwt of milk, compared with an estimated $9.61 in 1982 and $9.70 in 1981. After accounting for cash expenses, in which the two 50-cent deductions in 1983 are included, dairy farmers probably received a return of $4.42 per cwt, a decline of 63 cents (12 percent) from 1982, and $0.82 (16 percent) from 1981. Net returns to owned inputs (capital, land, unpaid family labor, management, and risk) are forecast to be $4.21 per cwt, compared with an estimated $5.02 in 1982 and $5.03 in 1981.

Keywords: Dairy enterprise, production costs, cash expenses, costs and returns, inputs, resources.

The 1973, 1977, and 1981, Agriculture and Consumer Protection acts directed the Secretary of Agriculture to estimate the annual costs of producing certain major agricultural commodities, including milk. To implement the legislation, the Economic Research Service (ERS), USDA, conducts a research program, and results are published by ERS and the Congress. Some of the data in this article were previously published[2]. The costs and returns estimates are based primarily on an early 1980 survey of 2,095 dairy farmers in the New England region (figure A) and 19 other States. The sampled area represents about 85 percent of the total U.S. milk production.

Figure A

Production Subregions for Milk Cost Anaiysis



Nationally, Expenses Up; Returns Lower

In the United States in 1983, total cash expenses for the dairy enterprise are forecast to average $10.23 per cwt of

Table A.—U.S. milk production costs and returns, by selected cost and returns items

Item	1981	1982[1]	1983[2]
	Dollars per cwt		
Total cash receipts	14.94	14.66	14.65
Cash expenses			
Variable[3]	7.45	7.26	7.94
Fixed[4]	2.25	2.35	2.29
Total	9.70	9.61	10.23
Receipts less cash expenses	5.24	5.05	4.42
Capital replacement	1.64	1.58	1.66
Receipts less cash expenses and replacement	3.60	3.47	2.76
Economic costs			
Variable expenses[3]	7.45	7.26	7.94
General farm overhead	.49	.48	.48
Taxes and insurance	.33	.32	.36
Capital replacement	1.64	1.58	1.66
Allocated returns to owned inputs			
Operating capital (equity)	.20	.17	.18
Other nonland capital	1.10	1.03	1.07
Land	.37	.35	.34
Unpaid labor	1.46	1.55	1.56
Residual to management and risk	1.90	1.92	1.06
Net returns to owned inputs	5.03	5.02	4.21

[1]Preliminary. [2]Preliminary estimate—more precise estimates will be available in the summer. [3]Includes feed, veterinary and medicine, marketing, bedding, custom feed mixing, fuels, machinery and building repairs, hired labor—and, in 1983, payments under the two 50-cent-per-cwt deductions authorized by Congress. [4]Includes taxes and insurance, general overhead, and interest paid on land and nonland capital.

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[2]"Economic Indicators of the Farm Sector: Cost of Production, 1982," National Economics Division, Economic Research Service, U.S. Department of Agriculture, ECIFS 2-3, Dec. 1983, pp. 155-168.

milk, compared with an estimated $9.61 in 1982 and $9.70 in 1981 (table A). Preliminary calculations show total variable cash expenses at $7.94 per cwt in 1983, up from $7.26 in 1982 and $7.45 in 1981. Additional outlays due to the two 50-cent deductions in 1983 are included in both variable and total cash expenses. Feed costs, the largest component, decreased in 1982, but increased substantially in 1983.

Cash expenses for the dairy enterprise in 1983 are forecast based on the cost structure of the industry in 1979 and changes in input prices over time. However, there are indications that some dairymen (especially high-cost producers) have made concerted efforts to reduce operating expenses in light of the added expenditures resulting from the two 50-cent-per-cwt deductions authorized by Congress in the Omnibus Budget Reconciliation Act of 1982, and in anticipation of lower prices ahead. A study of 90 New England farms on the Electronic Farm Accounting System (ELFAC), a mail-in farm records program coordinated by the Cooperative Extension Services of Connecticut, Massachusetts, Maine, New Hampshire,

Table B.—Milk production costs and returns per cow and per cwt, by cost and returns items, all regions[1]

	1981		1982[2]	
	Per cow	Per hundredweight[3]	Per cow	Per hundredweight[3]
	Dollars			
CASH RECEIPTS:				
Milk	1,864.44	13.69	1,862.11	13.52
Cull cows, calves, & replacement sales	170.24	1.25	157.01	1.14
Total receipts	2,034.68	14.94	2,019.12	14.66
CASH EXPENSES:				
Feed:				
Concentrates	469.86	3.45	440.73	3.20
Corn silage	44.94	.33	41.32	.30
Hay	108.95	.80	111.56	.81
Haylage	31.32	.23	31.68	.23
Pasture & miscellaneous forages	5.45	.04	5.51	.04
Total feed costs	660.52	4.85	630.80	4.58
Other variable cash expenses:				
Milk hauling	47.67	.35	49.58	.36
Milk marketing	13.62	.10	13.77	.10
Artificial insemination	14.98	.11	16.53	.12
Veterinary and medicine	27.24	.20	27.55	.20
Dairy supplies	25.88	.19	26.17	.19
DHIA fees	6.81	.05	6.89	.05
Livestock hauling	2.72	.02	2.75	.02
Fuels and electricity	54.47	.40	55.09	.40
Machinery and equipment repairs	47.67	.35	50.96	.37
Hired labor	113.04	.83	119.83	.87
Total other variable cash expenses	354.10	2.60	369.12	2.68
Total variable cash expenses	1,014.62	7.45	999.92	7.26
Fixed cash expenses:				
Taxes and insurance	44.64	.33	44.08	.32
General overhead	66.73	.49	66.11	.48
Interest	194.75	1.43	213.48	1.55
Total fixed cash expenses	306.12	2.25	323.67	2.35
Total cash expenses	1,320.74	9.70	1,323.59	9.61
Receipts less cash expenses	713.94	5.24	695.53	5.05
Capital replacement	223.35	1.64	217.61	1.58
Receipts less cash expenses and replacement	490.59	3.60	477.92	3.47
ECONOMIC COSTS:				
Variable cash expenses	1,014.62	7.45	999.92	7.26
Taxes and insurance	44.64	.33	44.08	.32
General overhead	66.73	.49	66.11	.48
Capital replacement allowance	223.35	1.64	217.61	1.58
Allocated returns to owned inputs:				
Operating capital	27.24	.20	23.41	.17
Other nonland capital	149.81	1.10	141.86	1.03
Land	50.39	.37	48.21	.35
Unpaid labor	198.84	1.46	213.48	1.55
Residual to management and risk	259.06	1.90	264.44	1.92
NET RETURNS TO OWNED INPUTS	685.34	5.03	691.40	5.02

[1]Weighted average. [2]Preliminary. [3]Hundredweight of milk represents all milk sold and consumed on the farm.

Vermont, and West Virginia, showed that they averaged 71 cows per farm during the first 6 months of 1983, compared with 69 during the same period in 1982. Also, anticipated reductions in cash flow encouraged dairymen to reduce operating expenses by 16 cents per cwt[3]. Thus, forecasting procedure for the cost of production may overstate cash expenses and understate net returns in 1983, since it does not account for changing practices and structural change in the industry.

Fixed cash expenses for 1983, likely coming to $2.29 per cwt, were down slightly from $2.35 in 1982, but up from $2.25 in 1981. Economic costs (which include placing a value on inputs and resources required in current milk production regardless of how much equity the owner has) probably reached $10.44 per cwt in 1983, a rise of 8.3 percent from $9.64 in 1982.

Gross dairy enterprise receipts (from sales of milk, culled cows, calves, and replacements) are expected to average $14.65 per cwt in 1983, down 1 cent from 1982 and 29 cents from 1981. The 50-cent deductions are not reflected in the 1983 price, but are included in the estimated variable expenses. Sales of milk account for about 92 percent of dairy revenue, while sales of culled cows, calves, and dairy replacements account for the remaining 8 percent (table B).

Given estimated cash expenses of $10.23 per cwt, dairy farmers are anticipated to have received, on average, a return of $4.42 per cwt, a decline of 63 cents (12 percent) from 1982, and $0.82 (16 percent) from 1981 (table A). After accounting for cash expenses and capital replacement reserves, net returns were probably $2.76 per cwt, compared with $3.47 in 1982 and $3.60 in 1981. Preliminary calculations indicate that net returns to owned inputs (capital, land, unpaid family labor, management, and risk) were $4.21 per cwt, compared with $5.02 in 1982 and $5.03 in 1981.

[3]Sciabarrasi, Michael R., and George E. Frick, "How 90 England Farms Reacted to the Assessment," Hoard's Dairyman, Oct. 10, 1983, p. 1215.

Detailed data on milk production costs and returns for the United States in 1981 and 1982 are presented in table B, with data for both per cow and per cwt. Detailed projections are not yet available for 1983.

Regional Revenues, Costs, and Returns Vary

Farmers' price, production costs, and net returns to owned inputs varied greatly among regions (table C). In 1982, for example, total cash expenses were as low as $9.02 per cwt in the Upper Midwest, and as high as $11.48 in the Southern Plains. Net returns to owned inputs were highest in the Upper Midwest and lowest in the Appalachian and the Southern Plains regions, at $5.61, $4.38, and $4.40, respectively. Residual returns to management and risk were lowest in the Corn Belt (60 cents per cwt) and highest in the Pacific region ($3.20 per cwt).

Methods and Concepts Revised

Data in this report are not directly comparable with costs and returns published in prior years. ERS has revised the procedures and format used to present the costs and returns of producing major agricultural commodities in the United States, including milk, to more accurately reflect the financial well-being of today's farm sector. The revised budgets now present additional information that includes both the short-run cash flow and the long-run economic costs of inputs. Additional detail describing the cost of production format and revision in procedures is presented in "Economic Indicators of the Farm Sector: Costs of Production, 1982," ERS, USDA, ECIFS 2-3, Dec. 1983.

The costs and returns presented here are the weighted average for a region, or for the United States. It should be emphasized that the costs for an individual farm may differ significantly from average regional or national figures for a variety of reasons: Differences in production per cow; climate; management skills; herd size; and prices paid for feed, labor, and other inputs.

Table C.—Milk production costs and returns, by selected cost and returns items, by regions and the U.S., 1982[1]

Item	Northeast	Upper Midwest	Corn Belt	Appalachia	Southern Plains	Pacific	All regions[2]
				Dollars per cwt[3]			
CASH RECEIPTS							
Milk	13.85	13.21	13.37	13.89	14.60	13.27	13.52
Cull cows, calves, & replacement sales	1.10	1.38	1.09	.95	.93	.86	1.14
Total cash receipts	14.95	14.59	14.46	14.84	15.53	14.13	14.66
CASH EXPENSES							
Feed	4.56	3.82	4.52	5.37	6.31	5.79	4.58
Other variable expenses	2.94	2.40	2.82	2.99	2.96	2.54	2.68
Total variable expenses[4]	7.50	6.22	7.34	8.36	9.27	8.33	7.26
Total fixed expenses[5]	2.12	2.80	2.64	2.16	2.21	1.71	2.35
Total cash expenses	9.62	9.02	9.98	10.52	11.48	10.04	9.61
Receipts less cash expenses	5.33	5.57	4.48	4.32	4.05	4.09	5.05
Capital replacement	1.59	1.87	1.84	1.44	1.24	.79	1.58
Receipts less cash expenses and replacement	3.74	3.70	2.64	2.88	2.81	3.30	3.47
ECONOMIC COSTS							
Variable expenses[4]	7.50	6.22	7.34	8.36	9.27	8.33	7.26
General farm overhead	.60	.51	.41	.36	.35	.35	.48
Taxes and insurance	.31	.38	.35	.30	.27	.15	.32
Capital replacement	1.59	1.87	1.84	1.44	1.24	.79	1.58
Allocated returns to owned inputs							
Operating capital (equity)	.17	.16	.17	.18	.20	.21	.17
Other nonland capital	1.05	1.16	1.17	.94	.71	.65	1.03
Land	.76	.43	.60	.43	.20	.07	.35
Unpaid labor	1.56	1.94	1.98	1.10	.80	.38	1.55
Residual to management and risk	1.41	1.92	.60	1.73	2.49	3.20	1.92
NET RETURNS TO OWNED INPUTS	4.95	5.61	4.52	4.38	4.40	4.51	5.02

[1]Preliminary. States within respective regions where dairy farmers were interviewed: Northeast (NY, PA, OH, NEW ENGLAND), Upper Midwest (MN, WI, MI, SD), Corn Belt (IN, IL, IA, MO), Appalachia (KY, TN, VA, NC, GA), Southern Plains (TX), Pacific (CA, WA). [2]Weighted average. [3]Hundredweight of milk represents all milk sold and consumed on the farm. [4]Includes feed, hired labor, fuels and electricity, machinery and equipment repairs, milk and livestock hauling, marketing, veterinary and medicine, supplies, and artificial insemination. [5]Includes taxes and insurance, general overhead, and interest paid on land and nonland capital.

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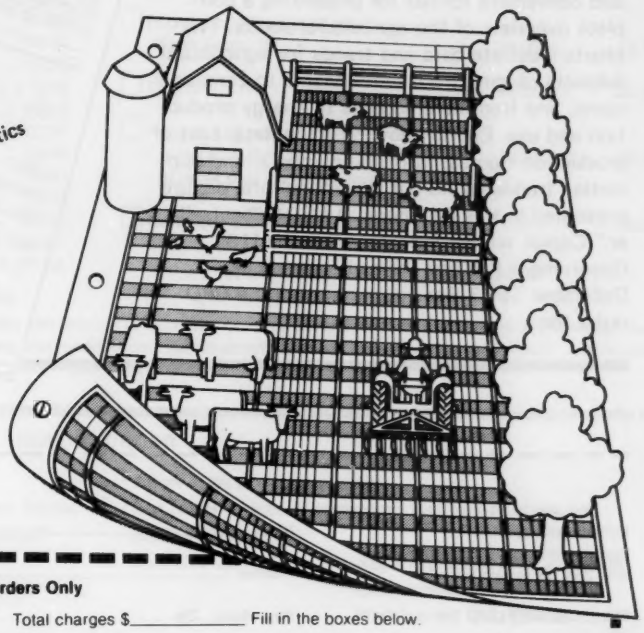

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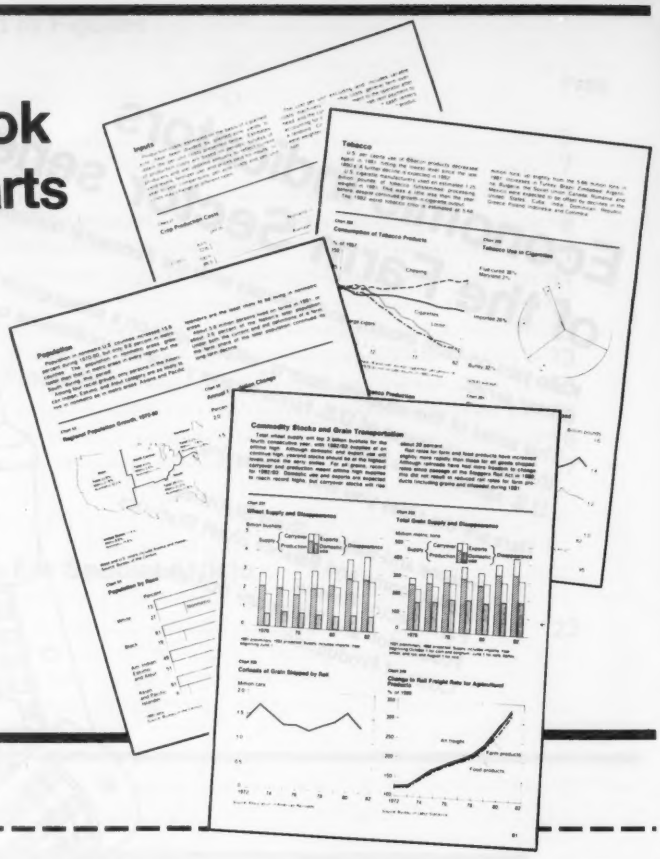

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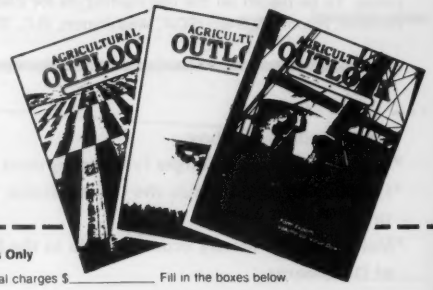

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